2024 Maths Assessment Snapshot Checkpoints for Number & Algebra

Phase 1a – **Years 0/1** *(Focus: 0-10)* (1st 6 months & 1st year).

Phase 1b – **Years 1/2** *(Focus=10-20)* (1st year)

Phase 1c – **Year 2** *(Focus=up to 100 & 1000)* (2nd year)

Phase 1d – **Year 3** *(Focus=up to 10,000)* (3rd year)

Phase 2a – **Year 4** *(Focus=up to 10,000)* (4th year)

Phase 2b – **Year 5** *(Focus=up to 100,000)* (5th year)

Teacher notes.

- Please note, that this resource is ongoing, so it will have further Phases added as they are completed. As it is also an area that I am still coming to grips with, (Phase levels), some changes may be ongoing to any of the below sheets. It is not absolute, but my attempt to try and put something together that is useful to me.
- Not all concepts in Number & Algebra have been included, although I have tried to include most of them based on each phase.
- These Assessment Snapshot Checkpoints could be used in a number of ways. This could include either doing it as a 'before/pre-test' and/or, an 'after/post' test' at set dates during the year, or it could be an ongoing assessment task, where different parts are tested/assessed at different times. They could be done as a formal test, or as an informal test. It could be where it is done independently, or where the teacher reads out the questions. In some instances, it could also be where the child writes answers on a whiteboard/book, and where the teacher writes the results on the sheet. As always, there is no set way. Just use it in a way which bests works for you and your class.
- The sheets could be used as they are, or enlarged to A3 size to make the space and text easier to read. The opposite A3 side could also be where the kids write some of their answers as evidence, as opposed to possible whiteboard use.
- There are similar crossovers in Phase 1d (Year 3) and Phase 2a (Year 4).
- These could be used as group or individual snapshot checkpoint assessments, as well as being used as a checklist for completed concepts, and concepts/skills/areas yet to be focussed on.

Phases, Curriculum Levels, Year levels		
Phases	Curriculum Levels	Year levels
1a	1	Years 0-1
1b	1	Years 1-2
1c	1	Year 2
1d	2	Year 3
2a	2	Year 4
2b	3	Year 5
2c	3	Year 6
3a	4	Year 7
3b	4	Year 8
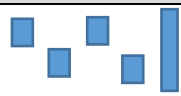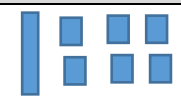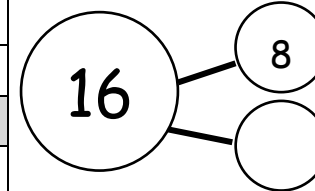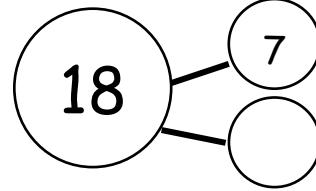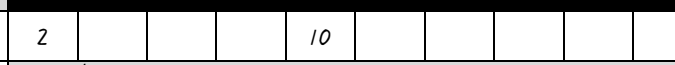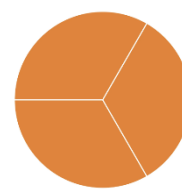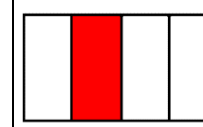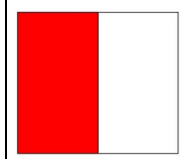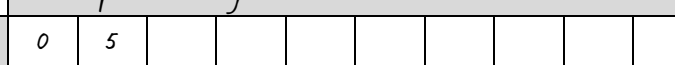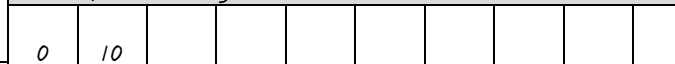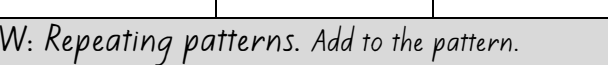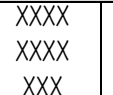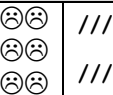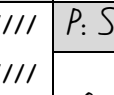
Maths Assessment Snapshot Checkpoint - Number & Algebra – Phase 1a – Years 0/1 (Focus: 0-10) (1st 6 months & 1st year).

Name: **Year:**   **Class:**   **Test Date/s:**   **Suggested Phase/Year:**

A: Write the numbers 0-10 (forwards)

| 0 | | | | | | | |
| | | | | | | ■ | |

B: Write the numbers 10-0 (backwards)

| 10 | | | | | | | |
| | | | | | | ■ | |

C: Fill in the missing numbers (before & after)

| | 3 | | ■ | | 5 | |
| | 7 | | ■ | | 9 | |

D: Comparisons (< > =)

| 3 | | 1 | ■ | 8 | | 7+1 |
| 4 | | 6 | ■ | 9 | | 10 |

E: Ordering (smallest to highest)

| 3 | 9 | 5 | 10 | 1 | 8 |
| | | | | | |

F: Ordering (highest to smallest)

| 2 | 8 | 4 | 9 | 6 | 10 |
| | | | | | |

G: How many are in each box? Representations

| ☺☺☺☺ | XX | ***** | ✓✓✓✓ ✓✓✓✓ | ☹☹☹☹ ☹☹☹ | ///// ///// |
| | | | | | |

H: Addition to 6

3 + 3 =

4 + 2 =

1 + 5 =

0 + 6 =

I: Subtraction from 6

6 – 3 =

6 – 2 =

6 – 5 =

6 – 0 =

J: Word problems - addition to 10

How many legs do 3 people have?

How many lollies are there if 2 people have 3 each?

K: Word problems – subtraction from 10

I had 6 lollies and ate 4. How many left?

I had 10 biscuits and ate 3. How many left?

L: Place Value. What numbers do these show?

M: Number Bonds

N: Skip counting in 2's (to 10 and 20)

| 2 | | 4 | | |

| 2 | 4 | | | | 14 | 16 | |

O: Skip counting in 5's

| 0 | 5 | | | | | |

P: Skip counting in 10's

| 0 | 10 | | | | | |

Q: Addition to 10

3 + 7 =

4 + 6 =

1 + 9 =

10 + 0 =

R: Subtraction from 10

10 – 7 =

10 – 6 =

10 – 9 =

10 – 0 =

S: Matching words and numerals (to 10)

One	2		7	Six
Two	5		8	Seven
Three	1		9	Eight
Four	3		10	Nine
Five	4		6	Ten

T: Grouping (introduction to times concept)

If there are 2 people, how many arms do they have altogether?

If 3 people have 3 biscuits each, how many biscuits do they have altogether?

U: Sharing (introduction to division concept)

If I had 6 lollies and there were 3 people, how many lollies would each person get?

If there were 2 people and I had 10 biscuits, how many biscuits would each person get?

V: Wholes (1/1) & Halves (½) & Quarters (¼)

| 1 or ½ or ¼ | 1 or ½ or ¼ | 1 or ½ or ¼ |

W: Repeating patterns. Add 2 more to the pattern

Maths Assessment Snapshot Checkpoint - Number & Algebra – ==Phase 1b== – ==Years 1/2== (Focus=10-20) (1st year)

Name: Year: Class: Test Date/s: Suggested Phase/Year:

A: Write the numbers 10-20 (forwards)

10							■

B: Write the numbers 20-10 (backwards)

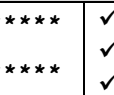| 20							■

C: Fill in the missing numbers (before & after)

	13		■		20	
	16		■		17	

D: Comparisons (< > =)

13		11	■	20		19
15		15	■	12		15

E: Ordering (smallest to highest)

18	12	20	11	16	19

F: Ordering (highest to smallest)

10	13	14	17	15	20

G: How many are in each box? Representations

☺☺☺☺ ☺☺☺☺ ☺☺☺☺	XXXX XXXX XXX	***** ***** *****	✓✓✓✓ ✓✓✓✓ ✓✓✓✓	☹☹☹☹ ☹☹☹☹ ☹☹☹☹	//////// //////// ////////

H: Addition to 20

13 + 3 =

14 + 2 =

15 + 5 =

10 + 6 =

I: Subtraction from 20

16 – 3 =

18 – 2 =

16 – 5 =

12 – 0 =

J: Word problems - addition to 20

13 iceblocks + 5 iceblocks = how many iceblocks?

How many lollies are there if 5 people have 4 each?

K: Word problems – subtraction from 20

I had 16 lollies and ate 3. How many left?

I had 17 biscuits and ate 7. How many left?

L: Place Value. What numbers do these show?

M: Number Bonds

16 → 8 / ?

18 → 7 / ?

N: Skip counting in 2's (to 20)

■ (blacked out)

2				10				

O: Skip counting in 5's

0	5						

P: Skip counting in 10's

0	10					

Q: FoF Addition to 20

13 + 7 =

7 + 13 =

12 + 7 =

7 + 12 =

R: FoF Subtraction from 20

20 – 7 =

20 – 13 =

19 – 7 =

19 – 12 =

S: Matching words and numerals (to 10)

Tahi	2		7	Ono
Rua	5		8	Whitu
Toru	1		9	Waru
Wha	3		10	Iwa
Rima	4		6	Te kau

T: Grouping (introduction to times concept)

If there are 5 people, how many arms do they have altogether?

If 6 people have 3 biscuits each, how many biscuits do they have altogether?

U: Sharing (introduction to division concept)

If I had 18 lollies and there were 2 people, how many lollies would each person get?

If there were 4 people and I had 12 biscuits, how many biscuits would each person get?

V: Wholes (1/1) & Halves (½) & Quarters (¼)

1 or ½ or ¼	1 or ½ or ¼	1 or ½ or ¼

W: Repeating patterns. Add to the pattern.

Maths Assessment Snapshot Checkpoint - Number & Algebra – Phase 1C – Year 2 (Focus=up to 100 & 1000) (2nd year)

Name: _____   Year: _____   Class: _____   Test Date/s: _____   Suggested Phase/Year: _____

A: Write the next number (up to 100)

29		36		45	
56		68		79	

B: Write the next number (up to 1000)

122		234		354	
485		555		899	

C: Fill in the missing numbers (before & after)

	56		███		554	
	99		███		854	

D: Comparisons (< > =)

65		61	███	263		632
79		97	███	741		700+41

E: Ordering (smallest to highest – up to 100)

65	56	83	38	51	15

F: Ordering (smallest to highest – up to 1000)

125	500	115	340	680	799

G: Money

50c + 20c =	10c + 10c + 10c=	$2 + $2 =

I had $2.00 and spent 0.50c. How much was left?
What was my change from a $2 coin?

H: FoF (Family of Facts)

23+10=

10+23=

33−10=

33−23=

I: Doubles

20+20=

30+30=

100+100=

400+200=

J: Word problems – addition & subtraction

3 people had $10 each. How much altogether?

I had $30 and spent $20. How much left?

K: Word problems – multiplication

If there are 3 cars, how many wheels are there altogether?

L: Place Value. What numbers do these show?

M: Number Bonds

38 — 7, ○

123 — 4, ○

N: Skip counting in 2's

142						
32						

O: Skip counting in 5's

55						

P: Skip counting in 10's

120						

Q: Odd & Even Numbers

5   8

25   30

53   78

125   148

R: Times Tables

To ask the child a number of random tables from the areas of focus.

2X   5X

10X

S: Matching words and numerals (beyond 10)

Fourteen	20	7	Twenty Five
Eighteen	13	8	Thirty Eight
Thirteen	15	9	Forty Seven
Fifteen	18	10	Fifty
Twenty	14	6	Sixty Three

T: Ordinal Numbers (1st, 2nd, 3rd etc)

Start | A   C   E | Finish
              D   B   F

1. Which letter will be 1st?   3. 2nd

2. Which letter will be 3rd?   4. Last

U: Sharing (introduction to division concept)

If I had 3 friends and we all went out and bought 15 ice blocks, how many would each person get?

V: Wholes & Halves (½) & Quarters (¼) & Thirds (1/3)

How many ¼'s in one ½?		How many halves in 1 whole?
1 or ½ or ¼	1 or ½ or ¼	1 or ½ or ¼

W: Partitioning (+ & −) 2 digits (no renaming)

32 + 24 =   86 − 42 =

64 + 22 =   57 − 42 =

Maths Assessment Snapshot Checkpoint - Number & Algebra – ==Phase 1d== – ==Year 3== (Focus=up to 10,000) (3rd year)

Name: Year: Class: Test Date/s: Suggested Phase/Year:

A: Write the next number (up to 1000)

| 63 | | 101 | | 899 | |
| 24 | | 150 | | 904 | |

B: Write the next number (up to 10,000)

| 2000 | | 2450 | | 3600 | |
| 4999 | | 5999 | | 8888 | |

C: Fill in the missing numbers (before & after)

| | 89 | | ■ | | 250 | |
| | 4000 | | ■ | | 3581 | |

D: Comparisons (< > =)

| 256 | | 652 | ■ | 4895 | | 4859 |
| 2000 | | 2001−1 | ■ | 2490 | | 2409 |

E: Ordering (smallest to highest – up to 1000)

| 100 | 254 | 145 | 65 | 555 | 56 |
| | | | | | |

F: Ordering (smallest to highest – up to 10,000)

| 10000 | 9999 | 320 | 32 | 3200 | 9909 |
| | | | | | |

G: Money

| 20C+20C+20C= | 10C+20C+50C= | $2.00+$5.00= |

I had a $10.00 note. I spent $2.50. What change did I get back?

J: Word problems – addition & subtraction

4 people had $100.00 each. How much together?

You have $50.00 and spend $20.00. How much left?

K: Word problems – multiplication

1. How many ears do 5 people have?

2. 5 motorbikes have how many wheels?

L: Place Value Blocks

Use blocks/whiteboards to show the following:

1. 35   2. 154 (using only 10's & 1's)   3. 365

M: Rounding to 10's / Decades & 100's

(10's)   12=   42=   87=   92=

(100's)   102=   166=   249=   501=

N: Expanded Numerals / Values

1. 39=   2. 624=

3. 2657=

O: Skip counting in 2's

| 96 | | | | | | | | |

P: Skip counting in 5's

| 895 | | | | | | | | |

Q: Skip counting in 10's

| 1200 | | | | | | | | |

T: Place Values (PV), Total Values (TV)

23	456	1456	8541
PV=	PV=	PV=	PV=
TV=	TV=	TV=	TV=

U: 2 digit multiplication (no renaming)

42X2=   34X2=

V: Ordinal Numbers (1st, 2nd, 3rd etc)

| Start | G | F | I | | A | Finish |
| | J | D | C | B | H | |

1. Which 2 letters will probably come in last?

2. Who will come in 3rd?   3. Who will be 5th?

W: Single Digit Division (no remainders)

42 ÷2=   422÷2=   633÷3=

X: Fractions ½, 1/3, ¼, 1/5, 1/6, 1/8 + find a fraction of a unit

Draw shapes, (on paper or whiteboards), which show the following fractions.

| 1/2 | 1/3 | 1/4 | 1/5 | 1/6 | 1/8 |

H: FoF (Family of Facts) 4 ops	**I: Doubles**	**R: Odd & Even Numbers**	**S: Times Tables & Division**	**Y: Partitioning (+ & -) 2&3 digits (no renaming)**
12+8= 8+12=	40+40=	35 48	To ask the child a number of random tables from the areas of focus below.	52 + 23 = 66 − 31 =
20−8= 20−12=	20+20=	29 300		
2X5= 5X2=	10+10=	590 1040	2X 5X 10X	564 + 232= 957 − 534=
10÷5= 10÷2=	200+200=	8000 2484	÷2 ÷5 ÷10	

Maths Assessment Snapshot Checkpoint - Number & Algebra – Phase 2a – Year 4 (Focus=up to 10,000) (4th year)

Name: Year: Class: Test Date/s: Suggested Phase/Year:

A: Write the next number (up to 1000)

98		113		900	
39		164		877	

B: Write the next number (up to 10,000)

2500		3565		6999	
5000		1010		9999	

C: Less and More (*also to show on a numberline) ←++++++++→

	−1	−10	−100	+1	+10	+100
■						
350						

D: Comparisons (< > =)

182		128	■	500		5000
350+20		370	■	7777		6789

E: Ordering (smallest to highest – up to 1000)

199	600	56	555	304	340

F: Ordering (smallest to highest – up to 10,000)

3000	9000	7000	6000	5000	200

G: New Zealand Money 'c'=cents   '$'=dollars

50C+50C+50C=	50C+20C+20C=	$5.00+$5.00=

I had a $20.00 note. I spent $12.50. What change did I get back?

H: FoF (Family of Facts) 4 ops

15+5=   5+15=
20−5=   20−15=
4X5=   5X4=
20÷5=   20÷4=

I: Doubles & Halves

30+30=
50+50=
½ of 20=
½ of 40=

J: Word problems – some/all 4 operations (+,−,x,÷)

1. If I climbed 240 steps going up, and then the same going down, how many steps did I step on?
2. If I only climbed half way and back, how many steps did I step on?
3. Share 21 lollies between 3 people.

K: Place Value Blocks

Use blocks/whiteboards to show the following:

1. 39   2. 163 (using only 10's & 1's)   3. 555

L: Rounding to 10's / Decades & 100's

(10's)   123=   452=   817=   932=
(100's) 123=   452=   817=   932=

M: Expanded Numerals / Values. Expand the numbers

1423 =

854 =

N: Skip counting in 2's

100									

O: Skip counting in 5's

365									

P: Skip counting in 10's

1350									

Q: Odd & Even Numbers

33   49
28   304
560   1023
8000   3584

R: Times Tables & Division

To ask the child a number of random tables from the areas of focus below.

4X   2X   5X   10X

÷4   ÷2   ÷5   ÷10

S: Place Values (PV), Total Values (TV)

213	456	1456	8541
PV=	PV=	PV=	PV=
TV=	TV=	TV=	TV=

T: 2 digit multiplication (no renaming)

32 X 2 =   41 X 2 =

U: Single Digit Division (no remainders)

28 ÷2=   888÷4=   333÷3=

V: Fractions ½, 1/3, ¼, 1/5, 1/6, 1/8 Draw the fractions shown below.

2/2	2/3	2/4	2/5	2/6	2/8

W: Equivalent Fractions https://www.youtube.com/watch?v=brZOPhcQezY

Numerator=Top   Denominator=Bottom   Equivalent=same as

1. What are the equivalent fractions for…

½ =	/4	/6	/8	/10

2. Now draw examples to show the above equivalent fractions.

Using a fraction wall chart, which of these are NOT equivalent fractions for 1/3?   2/6   2/4   3/9   3/7

X: Groups of 10 in 3 digit numbers

123   456   239   999

Y: Partitioning (+ & −) 2&3 digits (no renaming)

51 + 24 =   76 − 36 =

584 + 432=   857 − 554=

Name: Year: Class: Test Date/s: Suggested Phase/Year:

A: Write the next number (after)

559		1035		9999	
11026		35012		49999	

B: Write the number before

← 23000		← 5600		
← 12325		←100,000		

C: Less and More

	−10	−100	−1000	+10	+100	+1000
64539						

D: Comparisons (using '< > =' symbols)

36042		36402		50000		49999+1
10050		10500		32965		32695

E: Ordering (smallest to highest)

35608	79016	1039	10039	79106	99999

F: Read, then write the numbers shown below

Twenty thousand, four hundred and seven	
Forty nine thousand, seven hundred and six	

G: New Zealand Money   'c'=cents   '$'=dollars

1. $2.00 + $2.00 + 50C + 50C + 20C =	2. $15.00+$25.00=

3. If I had $10.20 in coins, what coins could I have?

4. I had $25.00 and spent $7.00. What did I have left?

H: FoF (Family of Facts) 4 ops

12 + 8 =   8 + 12 =

20 - 8 =   20 - 12 =

6 X 7 =   7 X 6 =

42 ÷ 7 =   42 ÷ 6 =

I: Doubles & Halves

30,000 + 30,000 =

2500 + 2500 =

½ of 6000 =

½ of 80,000 =

J: Word problems – mixed operations (+,-,x,÷)

1. There were 5 people who had $20.00 each. They put all their money together and spent $64.00. 2 people then left, so they shared what change they had left between the remaining 3 people.

1. How much did each of the 3 people get?

K: Single digit division (remainders but no end remainders)

42÷7=   4200÷4=   3267÷3=

L: Rounding to 10's / Decades & 100's using $ & #'s

(10's)   23= $152.00=   887= $87.00=

(100's) $103.00=   782= $717.00=   1222=

M: Partitioning (expanded numerals)

24,203 =

85,444 =

N: Recombining (compact numerals)

8000 + 100 + 20 + 4 =

30,000 + 1000 + 600 + 20 + 4 =

O: Adding & subtracting whole numbers (renaming)

46 + 25 =	56 − 28 =
365 + 425 =	465 − 173 =
6544 + 4064 =	8941 − 2590 =

P: Multiplying (renaming)

42 X 3 =   554 X 5 =

42 X 23 =   23 X 33 =

423 X 23 =

Q: Times Tables & Division

All tables to 10 (x & ÷)

0   1   2   3   4   5

6   7   8   9   10   11   12

R: Place Values (PV), Total Values (TV)

2143	2556	51456	8525
PV=	PV=	PV=	PV (2)=
TV=	TV=	TV=	TV=

S: Groups of 10 in 3 digit numbers

523	403	339	899

T: Fractions, Decimals & Percentages

Put each line in order from smallest to largest

1/2	1/3	1/4	1/5	1/6	1/7	
0.5	0.33	0.25	0.2	0.16	0.14	
50%	33.33%	25%	20%	16.67%	70%	

Draw examples to show the following

1/5	20%	0.2	50%	0.5	2/4	0.75

U: Equivalent & Simplified Fractions

Numerator=Top   Denominator=Bottom   Equivalent=same as

1. What are the equivalent fractions for…

¼ =	/8	/12	/16	/20

Using a fraction wall chart, which of these are NOT equivalent fractions for 1/2?   2/4   4/6   3/6   /8

Simplify these fractions: 3/6   4/8   8/12   2/8   4/12

V: Find the following fractions of the numbers

¼ of 20=   1/6 of 42=   1/3 of 27=   1/5 of 35=

W: Money, fractions, decimals and percentages

1. Item was $20.00 but has 10% off. New price=$

2. Item was $18.00 but is now ½ price. New price=$

3. My bus ticket of $24.00 is now only a ¼ of the normal price. New price =$