GRADE 1-3 MATHEMATICS

TRAINING HANDOUT

TERM 1&2 2019

CONTENTS

TRAINING PROGRAMME

- Welcome to the Term 1 and 2 Training!

- Work through this programme with your trainer, to see which activities will be done.

	TIME	ACTIVITY	TRAINER WORKSHOP	TEACHER WORKSHOP
1	30 minutes	Welcome, housekeeping and updates		
2	30 minutes	Pre-training Activity		
3	30 minutes	Reflections		
4	1 hour	Orientation to the lesson plan structure and topics for Term 1&2		
5	2 hours	Topic: Building of pure number sense		
6	1 hour 30 minutes	Lesson distribution and preparation		
7	3 hours	Lesson demonstrations and feedback		
8	1 hour	Orientation to the trainer's guide		
9	30 minutes	Post Test		
10	30 minutes	Closure and evaluation		

Notes:

TERM 1 TOPICS

TERM 1 GRADE 1

1. Zero and one
2. The number 2
3. The number 3
4. Compare and order numbers 1 to 3
5. The number 4
6. The number 5
7. Numbers 1 to 5
8. Addition up to 4
9. Addition up to 5
10. Counting on – add up to 5
11. Breaking down and building up numbers to 5
12. Addition doubles – 1 to 5
13. Addition up to 5
14. Subtraction up to 4
15. Subtraction up to 5
16. Counting back – subtract up to 5
17. Add and subtract – number bonds and family facts
18. Numbers 6 to 10 – recognition
19. Number patterns to 10
20. Numbers 11 to 15 – recognition
21. Patterns of 10
22. Numbers 16 to 20 – recognition
23. Number patterns to 1 to 15
24. 3-D – balls and boxes
25. Size of 3-D objects
26. 3-D – building objects
27. Length
28. Geometric patterns
29. Data – sort objects
30. Mass
31. Mass – heavy and light
32. Capacity

33. Position
34. Position – follow directions
35. Grouping
36. Sharing
37. Passing time
38. Telling time

TERM 1 GRADE 2

1. Numbers up to 20
2. Numbers 11 to 20
3. Numbers 1 to 20 (place value)
4. Numbers 1 to 25 (place value)
5. Numbers 20 to 25 (place value)
6. Length
7. Counting on and back: addition and subtraction
8. Number bonds and family facts to 20
9. Building up and breaking down numbers
10. Addition doubles: 1 to 20
11. Near doubles
12. Mass – starting to understand kilograms
13. Building through 10 and working in tens
14. Tens and counting in tens
15. Tens arrays
16. Tens sharing and grouping
17. Number patterns: 10
18. Patterns of 10
19. Geometric patterns
20. Geometric patterns
21. Data
22. 3-D objects
23. Building with 3-D objects
24. Fives and counting in fives
25. Fives arrays
26. Fives sharing and grouping
27. Number patters: 5
28. Patterns of five

29. Money

30. Twos and counting in twos

31. Twos arrays

32. Twos sharing and grouping

33. Number patterns: twos

34. Patterns of two

35. Time

36. Time – Calendars

TERM 1 GRADE 3

1. Numbers 0 to 99

2. Place value up to 99

3. Compare and order numbers up to 99

4. Numbers between 100 and 200

5. Numbers 200 to 300

6. Numbers 300 to 400

7. Numbers 400 to 500

8. Addition on a number line

9. Subtraction on a number line

10. Addition and subtraction

11. Money

12. Fives and repeated addition

13. Fives arrays

14. Fives – sharing and grouping

15. Twos and repeated addition

16. Twos arrays

17. Twos – sharing and grouping

18. 2-D shapes

19. 2-D shapes: straight or round edges

20. Data – tally tables

21. Data – bar graphs and tables

22. Data – tallies and tables

23. Threes and repeated addition

24. Threes arrays

25. Threes – sharing and grouping

26. Fours and repeated addition

27. Fours arrays

28. Fours – sharing and grouping

29. Sharing leading to fractions

30. Fractions as parts of a group

31. Fraction shapes

32. Capacity/volume

33. Time – calendars

34. Analogue time

35. Time passed

36. Geometric patterns

37. Number patterns in fives

38. Number patterns in threes

39. Number patterns in fours

TERM 2 TOPICS

TERM 2 GRADE 1

1. Number 6

2. Number 7

3. Number 8

4. Number 9

5. Number 10

6. Understand numbers 1–10

7. Numbers 1–10

8. Conservation of numbers

9. Recognise numbers 11–19

10. Recognise numbers 20–29

11. Recognise numbers 30–39

12. Recognise numbers 40–50

13. Capacity and volume

14. Addition up to 10 – counting on

15. Addition – building up numbers up to 10

16. Addition and subtraction – building up and   breaking down numbers up to 10

17. Doubling and halving

18. Addition and subtraction problems

19. Geometric patterns

20. 2s patterns to 20

21. 5s patterns to 20

22. 10s patterns

23. 10s patterns using a number board

24. Collecting and organising data

25. Groups of two up to ten

26. 2s – repeated addition up to 10

27. Groups of 3 up to 10

28. 3s – repeated addition up to 10

29. Groups of 4 up to 10

30. 4s – repeated addition up to 10

31. Groups of five up to 10

32. 5s – repeated addition up to 10

33. Money

34. 2-D shapes

TERM 2 GRADE 2

1. Numbers 21–30

2. Numbers 21–30

3. Numbers 31–40

4. Numbers 31–40

5. Numbers 41–50

6. Family facts 0–50

7. Addition – doubles and near doubles up to 50

8. Addition – building and breaking down numbers 1–50

9. Addition using breaking down

10. Subtraction using breaking down

11. Money

12. Money problems

13. Counting in 10s

14. Fives up to 30 – sharing

15. Grouping and sharing – twos up to 30

16. Number patterns – twos up to 150

17. Directions

18. Position and orientation

19. Threes – multiplication

20. Number patterns – threes

21. Fours – multiplication

22. Number patterns – fours
23. Multiplication and division as inverse operations
24. Multiplication and division as inverse operations
25. 2-D shapes
26. Geometric patterns
27. Data
28. Symmetry
29. Fractions
30. Fraction problems
31. Time

TERM 2 GRADE 3

1. Place value: numbers 100–300
2. Place value: numbers 301–400
3. Place value: numbers 401–500
4. Ordinal numbers 200–300
5. Ordinal numbers 300–500
6. Problem solving strategies: building up and breaking down
7. Problem solving strategies: adding 3-digit numbers by breaking down the second number
8. Problem solving strategies: number lines
9. Working with tens – rounding off
10. Fives – number patterns
11. Fives – multiplication and division
12. Twos – number patterns
13. Twos – multiplication and division
14. Threes – number patterns
15. Threes – multiplication and division
16. Fours – number patterns
17. Fours – multiplication and division
18. Geometric patterns
19. Sharing leading to fractions
20. Fractions
21. Data
22. Money – value of money

23. Money – buying and selling problems

24. 3-D objects

25. 3-D objects: construction

26. Directions

27. Position and views

28. Symmetry

29. Length

30. Time

31. Time and calendars

32. Mass

33. 50s – patterns and problems

34. 100s – patterns and problems

TOPIC - WHAT IS NUMBER SENSE?

Numbers are everywhere; but they are abstract ideas. One book, one car and one toy have the same number 'one' but they are all different things. It takes a lot of repetition before your child really understands that numbers tell us about 'how many' not about the actual object itself.

Number sense is at the heart of the concept of numbers or understanding numbers. This skill is vitally important for your child to master in order to excel in Math.

Without it, numbers are meaningless and impossible to understand.

Number Sense is your sense of what numbers mean. What value does a number represent? Which number is bigger or smaller? Making comparisons is also part of this sense. Gersten and Chard say number sense "refers to a child's fluidity and flexibility with numbers, the sense of what numbers mean and an ability to perform mental mathematics and to look at the world and make comparisons."

Students that struggle with math typically don't have a good sense of number sense. This is one of the foundational concepts that holds them back from becoming fluid in math. You might think of number sense concepts in terms of the importance phonemic awareness plays in reading. Number sense plays that same role in math.

In the past, teachers have concentrated on math facts and how to do calculations. Now, after years of research, they have found that the reason students struggle with learning math is because they don't have the underlying foundation of what numbers actually mean: number sense. If you don't have that basic foundational skill, the new way of teaching math will still be difficult. We need to spend more time on mastering number sense.
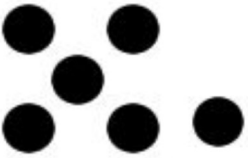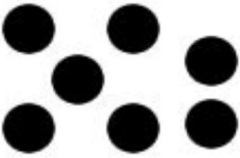
LESSON DEMONSTRATION ITEMS
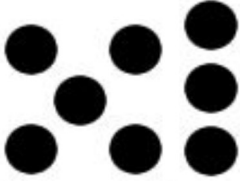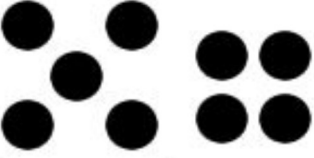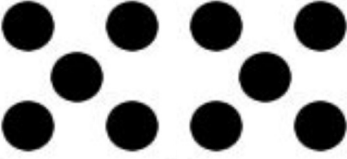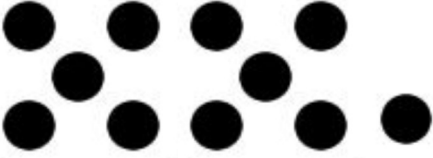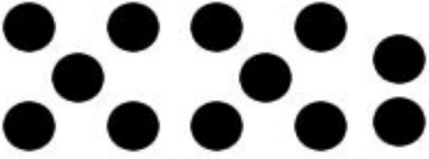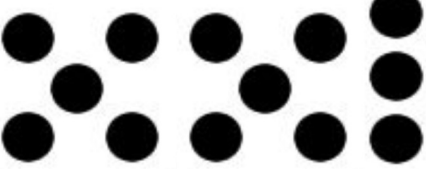
For the lesson demonstration shapes, you will need to use the following items.
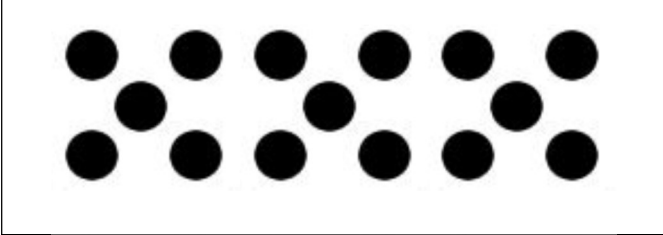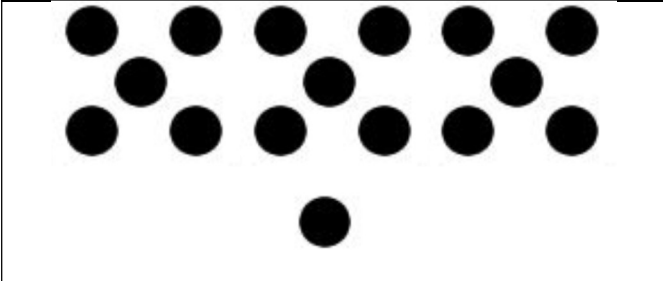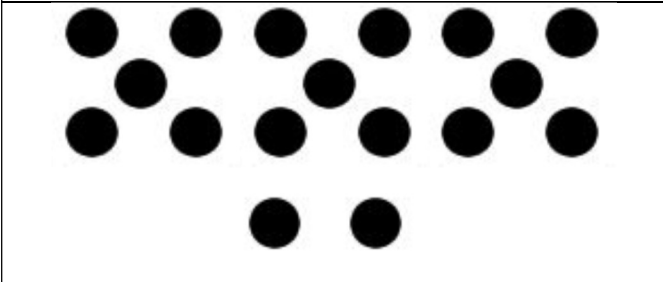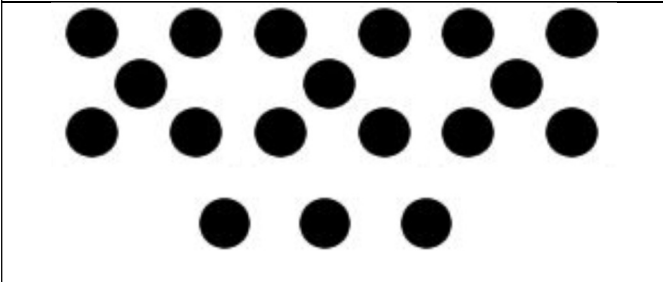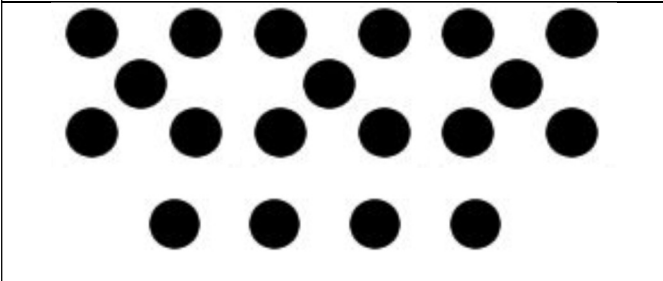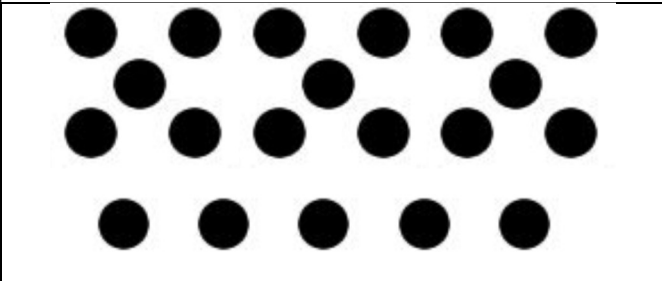
Number cards (1 – 100) for reward 100 chart

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

Number Puzzles 1

●	1
● ●	2
● ● ●	3
● ● ● ●	4
● ● ● ● ●	5
● ● ● ● ● ●	6
● ● ● ● ● ● ●	7

Number Puzzles 1

	8
	9
	10
	11
	12
	13
	14

	15
	16
	17
	18
	19
	20

Number Puzzles 2

●	1	one
●●	2	two
●●●	3	Three
●● ●●	4	four
●● ● ●●	5	five

I estimate, I count recording sheet

I Estimate	I count

Catch and Colour Bingo Card (card 1)

Catch and Colour Bingo Card (card 2)

Mix and Match number card

Number Symbol	
Number Name	**Number Circles**
Tally	**Pictures**
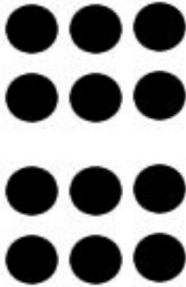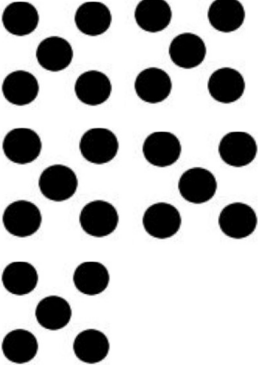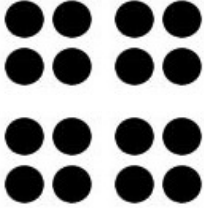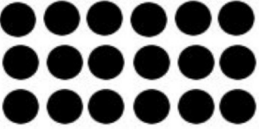
Mix and Match number symbols

12	3	25	7
16	18	9	1

Mix and Match number names

Twelve	Three	Twenty Five	Seven
Sixteen	Eighteen	Nine	One

Mix and Match number dots

(12 dots)	(3 dots)	(25 dots)	(6 dots)
(16 dots)	(18 dots)	(9 dots)	(1 dot)

Mix and Match number tallies

ⅡⅡⅡ ⅡⅡⅡ ⅡⅡ	ⅢⅢⅢ	ⅡⅡⅡ ⅡⅡⅡ ⅡⅡⅡ ⅡⅡⅡ ⅡⅡⅡ	ⅡⅡⅡ ⅡⅡ
ⅡⅡⅡ ⅡⅡⅡ ⅡⅡⅡ Ⅰ	ⅡⅡⅡ ⅡⅡⅡ ⅡⅡⅡ ⅢⅢⅢ	ⅡⅡⅡ ⅢⅢⅢⅢ	Ⅰ

Mix and Match number pictures

Guess My Number numbers

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 Final Number? Card

Starting number	Changes	Ending number

What's the Final Number? Numbers (400 – 500)

400	401	402	403	404	405	406	407	408	409
410	411	412	413	414	415	416	417	418	419
420	421	422	423	424	425	426	427	428	429
430	431	432	433	434	435	436	437	438	439
440	441	442	443	444	445	446	447	448	449
450	451	452	453	454	455	456	457	458	459
460	461	462	463	464	465	466	467	468	469
470	471	472	473	474	475	476	477	478	479
480	481	482	483	484	485	486	487	488	489
490	491	492	493	494	495	496	497	498	499
500									

What's the Final Number? Changing Cards

+ 30	+50	-10	-20
+ 100	+ 70	- 50	- 40
+80	+200	- 90	- 100

Number of the Day number cards

153	250	102	333
149	238	421	499
202	331	116	210

Number of the Day sheet

Number of the Day			