Grade 2 Mathematics

Terms 1, 2 and 3 - notes for 11 topics

IN EVERY TOPIC

- What you will learn and the key words.
- Short, clear notes with worked examples.
- Questions to try and a topic test, with the answers at the back.

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Strand 1.0 Numbers | Term 1

1.1 Pre-Number Activities

WHAT YOU WILL LEARN

By the end of this topic you should be able to:

- identify numbers 1 to 100 in symbols in different situations
- represent numbers 1 to 100 using concrete objects from the environment
- play number games using number cards or digital devices

KEY WORDS

number, symbol, ones, tens, bundle, hundred, counter, number chart.

1. Numbers around us

Numbers everywhere

Numbers are on clocks, calendars, money, phones, matatu number plates, house doors and shop prices.
Walk round the classroom and find numbers: on the calendar, the clock, books and the door.

2. Numbers 1 to 50 on the number chart

Reading the number chart

The 100-square chart has ten numbers in each row. The first row is 1 to 10, the second row 11 to 20, the third 21 to 30.
The teacher points to a number; learners read it aloud: 17, 23, 35, 48.

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

Ten numbers in each row. The shaded numbers are 17, 23, 35 and 48.

The number chart: ten numbers in each row

3. Numbers 51 to 100 on the number chart

The bottom half of the chart

Rows six to ten hold 51 to 100. The last number on the chart is 100 (one hundred).
Read numbers the teacher points to: 56, 63, 78, 85, 99, 100.

4. Matching number cards to the chart

Card match

Each learner picks a number card, reads it, and places it on the matching number on a big chart drawn on the floor or wall.

Check: is it in the right row and column?

5. Representing numbers with counters

Using counters

We represent a number by counting out that many objects: 14 bottle tops, 18 seeds, 20 sticks.

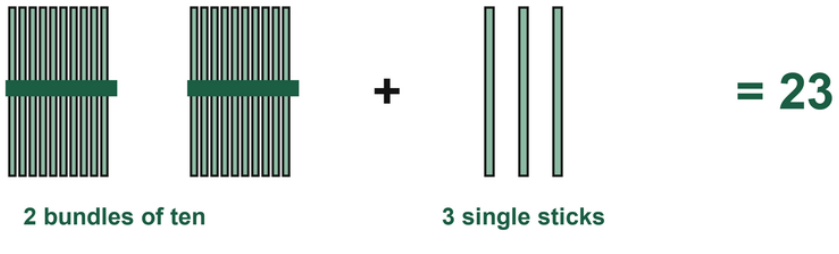
Put counters in rows of 5 to make counting easy: 3 rows of 5 make 15.

6. Bundling sticks in tens

Tens and ones

Count 10 sticks and tie them with a rubber band: one bundle is ten.

23 sticks make 2 bundles of ten and 3 single sticks (ones). 2 tens and 3 ones make 23.



2 bundles of ten and 3 single sticks make 23

7. Representing numbers up to 100

Big numbers with bundles

10 bundles of ten make 100 (one hundred).

Show 58: 5 bundles and 8 singles. Show 90: 9 bundles and no singles.

8. Numbers in real life

Counting real things

Count learners in the class, desks, books on a shelf, trees in the compound, or chairs in the staff room.

Record each count as a number: "Learners: 42. Desks: 21."

9. Number games with cards

Game: Bigger number wins

In pairs, each learner turns over a card. The learner with the bigger number reads both numbers and keeps the cards.

Game: Number snap: turn cards over; say "Snap!" when the tens digit is the same (for example 34 and 37).

10. Number games on a device or chart

Game: Find the number

The teacher (or an educational app) calls a number; a learner finds it on the 100-square chart or touches it on the screen.

Without a device, play on a chalk number chart on the ground: jump to the number called.

11. More and less

Comparing with objects

Show 24 with bundles (2 bundles, 4 singles) and 31 (3 bundles, 1 single). 31 has more bundles, so 31 is more than 24.

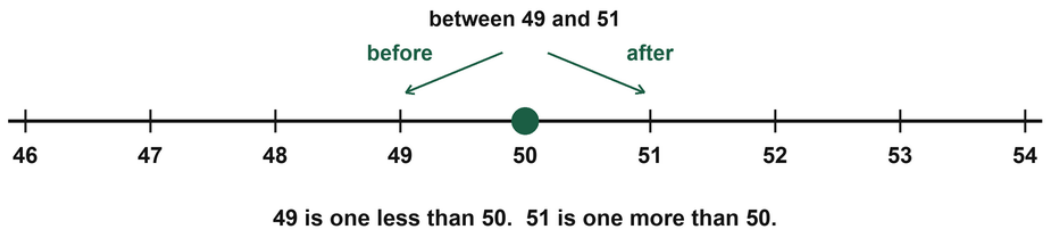
When the bundles are the same, compare the singles: 45 is more than 42.

12. Before, after and between

On the number line

Walk on the number line. The number before 50 is 49. The number after 50 is 51. The number between 49 and 51 is 50.

Before means one less; after means one more.



49 comes before 50; 51 comes after 50

13. Ordering numbers

Putting numbers in order

Smallest to biggest: 5, 12, 30. Biggest to smallest: 30, 12, 5.

Order the cards 67, 76, 60, 71: 60, 67, 71, 76.

14. Representing numbers with drawings

Drawing tens and ones

Draw a long line for each ten and a dot for each one. 35 is 3 long lines and 5 dots.

62 is 6 long lines and 2 dots.

15. Numbers in shops and markets

Classroom shop

Set up a pretend shop with labels: bread 60, milk 55, sweets 5, a pencil 20, an exercise book 40.

Learners read each price and say which item costs more.

16. Grouping objects in fives and tens

Counting in groups

Put seeds in groups of 5: 5, 10, 15, 20, 25, 30. Put sticks in groups of 10: 10, 20, 30, 40.
Grouping makes big numbers quicker to count and check.

17. Number bingo

Game: Number bingo

Each learner writes six numbers in a 2 by 3 grid. The teacher calls numbers. Cross out a number if it is called. The first to cross all six says "Bingo!" and reads them back.
Called numbers are put on the board so all can check.

18. Number games safely outdoors

Game: Number hop

Draw a big number line from 0 to 50 on the ground. The teacher calls "Start at 20, hop 5 forward." Where do you land? (25)
Take turns; wait behind the line until it is your turn.

19. Using numbers at home

Numbers at home

Families use numbers to tell the time, count money, measure food, count animals, read a phone number and know the date.
Each learner tells one way numbers were used at home.

20. Numbers 1 to 100 review

Review stations

Station 1: read cards from the chart. Station 2: show numbers with bundles. Station 3: order three cards. Station 4: bigger-number game.
Groups move round all stations.

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TRY THESE

1. Name a place where we see numbers.
2. What number is on our classroom door?
3. Read the number the teacher points to: 23.
4. Which row is 35 in?
5. Read the number 78.
6. What number comes after 99?
7. Read your card.
8. Place card 47 on the chart.
9. Show 12 using bottle tops.
10. Show 17 using seeds.
11. How many sticks are in one bundle?
12. Make 2 bundles. How many sticks altogether?
13. How many bundles of ten make 100?
14. Show 47.
15. How many learners are present today?
16. How many desks are in the class?

17. Which is bigger: 47 or 74?
18. Which is bigger: 59 or 61?
19. Find 63 on the chart.
20. Jump to 25.
21. Which is more: 24 or 31?
22. Which is less: 56 or 65?
23. What number comes before 70?
24. What number comes after 88?
25. Order from smallest: 18, 81, 28.
26. Order from smallest: 54, 45, 50.
27. Draw 35.
28. Draw 62.
29. Read the price of the bread.
30. Which costs more: milk or the exercise book?
31. Count 6 groups of 5.
32. Count 7 groups of 10.
33. Is 46 on your grid?
34. Read your six numbers.
35. Start at 20 and hop 5 forward. Where do you land?
36. Start at 40 and hop 3 back. Where do you land?
37. Name one way numbers are used at home.
38. Why do we need numbers on a phone?
39. Show 73 with bundles.
40. Order 39, 93, 33.

TOPIC TEST

T1. List five places with numbers at home.
T2. Read every number in the fifth row.
T3. Read every number in the ninth row.
T4. Which number is just above 75?
T5. Show 20 in two different ways.
T6. Show 76 with bundles and singles.
T7. Show 100 and 99. What is the difference?
T8. Count the books on a shelf and write the number.
T9. Play with three cards and put them in order.
T10. Call a number for your partner to find.
T11. Name a number more than 70 but less than 75.
T12. Name the numbers between 95 and 100.
T13. Order five cards you pick.
T14. Draw 100.
T15. Order all the prices from smallest to biggest.
T16. Group 100 bottle tops in tens.
T17. Lead a round by calling numbers.
T18. Start at 45 and hop 6 forward.
T19. Draw one way your family uses numbers.

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T20. Show 100 in two ways.

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