Grade 1 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:

- sort objects according to similar attributes in different situations
- match objects with similar attributes in the environment
- order objects according to given criteria in different situations
- create patterns of different sizes and shapes using real objects

KEY WORDS

sort, group, match, pair, size, colour, shape, texture, order, pattern.

1. Collecting safe objects

Collecting

Walk round the compound with the teacher and collect safe objects: bottle tops, leaves, small stones, sticks, seeds. Put them in a basket and name each one.

2. Sorting by colour

Colour groups

Put all objects of the same colour together: green leaves, red bottle tops, white stones.
Say the colour of each group.

3. Sorting by size

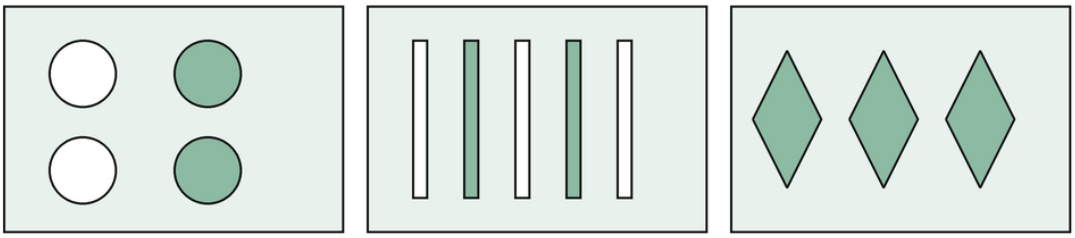
Big and small

Sort objects into two groups: big and small. Then try three groups: big, middle-sized, small.
Explain why each object is in its group.

4. Sorting by shape

Shapes

Sort objects into round ones (bottle tops, balls), long and thin ones (sticks, pencils) and flat ones (leaves, cards).
Name each shape group.



round long and thin flat

5. Sorting by use

Use

Sort pictures or real objects by use: things for eating (cup, plate, spoon), things for writing (pencil, crayon, book), things for cleaning (broom, brush).
Say what each group is used for.

6. Sorting by texture

Rough and smooth
Texture is how something feels. Sort objects into rough (stone, bark, sack) and smooth (bottle top, plastic, glass marble).
Close your eyes, feel an object and say rough or smooth.

7. Matching objects that are the same

Matching
Match objects that are exactly the same: two red bottle tops, two identical leaves, two picture cards that are the same.
Place the matching pair side by side.

8. Pairing objects that go together

Pairs
Pair objects that are used together: cup and saucer, pencil and paper, shoe and sock, key and padlock (pictures).
In teams, pair as many as possible.

9. Matching by colour and size

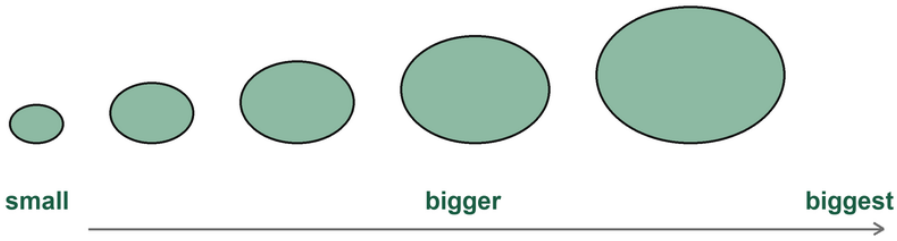
Two attributes
In teams, match objects that share two attributes, for example same colour and same size, or same shape and same texture.
Explain which two things are the same.

10. Sorting and matching games

Games
Each learner gets a picture card; on a signal, learners find others with the same colour, shape or use and stand together.
Then match pairs of cards in a memory game.

11. Ordering from smallest to biggest

Ordering by size
Arrange four or five stones in a line from the smallest to the biggest.
Say: small, bigger, biggest.



12. Ordering from biggest to smallest

Ordering
Arrange containers, blocks or bottle tops from the biggest to the smallest.
Compare with the smallest-to-biggest line.

13. Ordering by length and height

Long and tall
Line up sticks from shortest to longest, starting them at the same point. Then four learners stand in order from shortest to tallest.
Say: short, longer, longest; short, taller, tallest.

14. Helping to arrange items at school

Ordering in daily life
Arrange books from biggest to smallest on the shelf, line up shoes by size, and stack cups from biggest to smallest.
Talk about how ordering keeps things neat and easy to find.

15. What is a pattern?

Patterns
A pattern repeats in the same way. Make a line of bottle tops: red, blue, red, blue, red, blue.
Learners say what comes next.

16. Patterns of colour

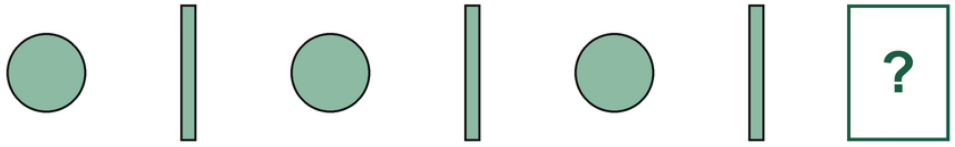
Colour patterns
Make patterns with bottle tops or crayons: green, yellow, green, yellow; red, red, white, red, red, white.
A partner continues your pattern.

17. Patterns of size

Size patterns
Make patterns with big and small stones or blocks: big, small, big, small; big, big, small.
Read the pattern aloud.

18. Patterns of shape

Shape patterns
Make patterns with objects of different shapes: bottle top, stick, bottle top, stick; leaf, leaf, stone.
Draw your pattern and colour it.



bottle top, stick, bottle top, stick ... what comes next?

19. Finding patterns around us

Patterns around us

Look for patterns on clothes, mats, baskets, fences, floor tiles and leaves. Describe each pattern.
Draw one pattern you found.

20. Pre-number activities review

Review stations

Rotate through stations: sort by colour or shape, match pairs, order from smallest to biggest, make a pattern.
Talk about where we sort and arrange things every day (at home, in shops).

TRY THESE

1. Name an object you collected.
2. Is broken glass safe to collect?
3. Put the red objects together.
4. What colour is this group?
5. Put the big stones together.
6. Is this stick big or small?
7. Put the round objects together.
8. Is a stick round or long?
9. Which objects are for eating?
10. Which are for writing?
11. What is texture?
12. Is bark rough or smooth?
13. Find the match for this card.
14. Why do they match?
15. What goes with a pencil?
16. What goes with a shoe?
17. Find one the same colour and size.
18. What two things are the same?
19. Find your group.
20. Why is your group together?
21. Arrange these from smallest to biggest.
22. Which is the smallest?
23. Arrange from biggest to smallest.
24. Which comes first?
25. Order the sticks from shortest to longest.
26. Why start the sticks at the same point?
27. Arrange the books by size.
28. Stack the cups.
29. What comes next: red, blue, red, ...?
30. Does a pattern repeat?
31. Make a two-colour pattern.
32. Make a three-colour pattern.
33. What comes next: big, small, big, ...?
34. Make a size pattern.

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35. What comes next: top, stick, top, ...?
36. Make a shape pattern.
37. Where did you see a pattern?
38. Describe the pattern.
39. Sort these objects. How did you group them?
40. Match these pairs.

TOPIC TEST

T1. Find an object that is round.
T2. Sort into four colour groups.
T3. Sort into three sizes.
T4. Find another round object in class.
T5. Add an object to the writing group.
T6. Name something soft.
T7. Play a memory game with matching cards.
T8. Think of a new pair.
T9. Match by shape and texture.
T10. Lead the game.
T11. Order six objects.
T12. Order five containers.
T13. Order five sticks.
T14. Arrange your desk neatly.
T15. Make a red, red, blue pattern.
T16. Make a pattern with four colours.
T17. Make a small, medium, big pattern.
T18. Mix size and shape in one pattern.
T19. Make a pattern for a basket design.
T20. Explain where sorting helps at home.

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Strand 1.0 Numbers | Term 1

1.2 Whole Numbers

WHAT YOU WILL LEARN

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

- count numbers forward up to 50
- count numbers backward from 30
- represent numbers 1 to 30 using concrete objects
- read and write numbers 1 to 50 in symbols
- read and write numbers 1 to 10 in words
- identify missing numbers in number patterns up to 20

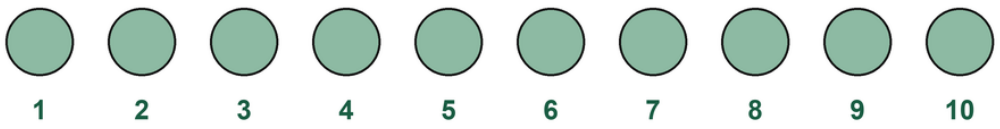
KEY WORDS

count, forward, backward, number, number line, ten, ones, bundle, missing number, pattern.

1. Counting objects up to 10

Counting objects

Touch and count bottle tops one by one: 1, 2, 3 ... 10. Each object is counted once.
Count fingers, desks and windows in the classroom.



Touch each bottle top once as you count.

2. Counting to 20

Counting to 20

Count aloud from 1 to 20 together, clapping on each number. Then count 20 seeds by touching and moving them.
We can count by saying numbers, touching objects, clapping or jumping on a number line.

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3. Counting forward to 30

Counting to 30

Count from 1 to 30 together. Then count on from different starting numbers: from 18 to 25, from 21 to 30.
Use a number line on the ground: step and count.

4. Counting forward to 50

Counting to 50

Count from 1 to 50 together, stepping along the number line on the ground. Notice the pattern: 31, 32 ... 39, 40, 41.
Count on from 35 to 50.

5. Counting games

Games

Sing a counting song; play "pass the count" in a circle (each learner says the next number up to 50); skip and count on the ground number line.
Use a counting game on a digital device if available.