REVISED EDITION

WOW! MATHS

BASED ON THE SINGAPORE BAR MODEL METHOD

Lesson Plans
**WOW MATHS** based on the Singapore Model offers complete Maths solutions for grade 1 to 8 in the form of text books, workbooks, lesson plans and more.

The lesson plans follow a learner centric approach and aim at experiential learning. They have been designed to ensure that whereby the learning objectives they aim to achieve are measurable and capable of analysis conductive to the understanding of children.

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- **The resources needed to carry out the activity in the lesson plan.**
- **The objective the lesson plan aims to achieve.**
- **The hands on experience to learn the concept.**
- **The concepts that have not been explicitly taught in the lesson, but can be associated with the activity or the concept learned through the lesson.**
- **Indirect questions, aimed at further probing and better understanding of the concepts.**
- **The new words related to the concepts which the child is to learn through the activity.**
- **The implied concepts that if the child is able to gather from the activity, help the teacher quantify that the child has understood the concept clearly.**
- **Questions to practice the concept taught.**
- **Higher order thinking questions to enhance the critical thinking skills of the child.**
- **The things parents can do/ or questions parents can ask their child to strengthen the understanding of the concept taught.**
- **Page numbers of the content book where the topic is covered.**
- **Page numbers of the workbook where practice questions related to the topic are given.**
Contents

1. Counting to 10 5
2. Number Bonds 10
3. Addition to 10 13
4. Subtraction to 10 19
5. Numbers 11 to 20 25
6. Numbers 20 to 100 36
7. Addition and Subtraction 50
8. Multiplication 64
9. Shapes and Patterns 72
10. Measurement 80
11. Time 87
12. Money 93
13. Data Handling 97
Learning Objective
- To practice counting through objects.
- To explore the concept of zero.

Material Required
Pencils, connecting cubes

Class Activity
- Call out a student.
- Ask him/her to show a pencil to depict 1.
- Say aloud ‘1’ and raise one finger.
- Show a connecting cube and say one again.
- Write one as number as well as number name.
- Ask the student to add a pencil each time to the previous set of pencils.
  Add a connecting cube to depict numbers from 2 to 10.
- Write the number and number name with each number.
- Tie ten pencils into a bundle to depict 10.
- Take away the pencils and show empty hands to represent nothing as zero. (Zero means ‘NO THING’)
- Inform that it is placed before 1 on the number line.
- Repeat activity with different objects and ask the students to count and write them as numbers and number names.
- Reiterate reading, writing and connecting cubes with each.

Understanding
Each successor number includes the previous number and one more.

Expected

Application
- How many books do you have in your bag?
- How many friends do you have? Name them.
- How many tails do you have?

Analysis
- What number comes after zero on the number line?
- How many numbers are there before 3?

Parents' Connect
Ask your child to count the following:
- number of tables laid for dinner plates.
- number of swings in the nearby park.
- number of feet different animals have.
- chappatis left at the dinner table when everyone has eaten.

Content Book Reference: Page 14-17
Guided Practice: Page 8-11
Learning Objective
To compare two numbers and find if they are greater than, less than or equal to each other.

Material Required
Connecting cubes (2 colours)

Stress Words
More than, less than, equal to

Activity
- Scatter cubes of 2 colours (4 red/6 blue) on a table.
- Ask two students to sort the cubes on the basis of colour and count them.
- Arrange them horizontally and compare their lengths.
- Associate with representation.

\[
\begin{align*}
\text{Red 4} & \quad \text{more} \\
\text{Blue 6} & \quad \text{less}
\end{align*}
\]

- Reiterate symbols with crocodile’s mouth that crocodile opens his big mouth to eat ‘More things’.
- Add 2 more red cubes and introduce ‘=’ sign
- Continue with more numbers till time permits.

Understanding
Expected
Number of a thing has nothing to do with shape or size of the object.

Associated Concepts
How many more? How many less?

Application
- Which is more?
  a) 7 books or 10 pens.
  b) 1 pumpkin or 10 grapes
- Which is less; number of books or notebook in your bag?

Analysis
- Which is more; your fingers or toes?
- What is more you have; eyes or nose?

Parents' Connect
Ask your child to compare the following:
» Number of any two of vegetables in your refrigerator.
» The number of glasses and bowls on the shelf / dinner table.
» Plants with flowers and plant without flowers in your balcony or park.
» Cars of 2 colours on a red light.

Content Book Reference: Page 18-20
Guided Practice: Page 12-14
Learning Objective
To explore the concept of before, after and between.

Material Required
Connecting cubes

Activity
• Call out a random number upto 10. Ask the students to count from 1 upto that number, say 7.
• Form a connecting block of 7.
• Bring their attention to 6 as the number spoken ‘just before’ 7. Remove a block to show 6.
• Similarly, add a block to show the number just after 7 as 8.
• Draw the same on the number line and explain. (Count back and count forward)
• Inform that the number in the middle of the number just before and the number just after is called the number ‘between’ the two numbers. Elucidate with the help of number line.
• Continue with more numbers till time permits.

Understanding
• ‘Before’ is different from ‘just before’ and ‘after’ is different from ‘just after’.
• The number before is less than the given number and the number after is greater that the given number.
• Zero comes just before 1.

Expected

Application
• If there are 6 books in a pile, what was the number of books just before 6?
• If one more is kept, how many books are there just after the one added?

Analysis
Write the numbers between 3 and 6.

Parents’ Connect
• Take your child to walk and make him/her find the house number before/after your house.
• Make the child find a house number between two given house numbers.

Content Book Reference: Page 20, 21
Guided Practice: Page 15-16
### Lesson Plan - 4

**Grade - 1**

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>To arrange the given set of numbers in increasing or decreasing order.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Required</td>
<td>Connecting cubes, number counters and colour pens (9 each of 4 colours)</td>
</tr>
<tr>
<td>Stress Words</td>
<td>Increasing, decreasing</td>
</tr>
</tbody>
</table>

### Activity

- Call out any four students and ask them to build four towers of different colours and different height.
- Ask any other student to arrange them according to their heights.
- Make the class observe that the tower are arranged in increasing/decreasing order.
- Ask the students to count the number of cubes in each tower and place number counters in front of each.
- Announce that the order in which number are arranged is increasing/decreasing order.
- Repeat the activity using different numbers.

### Understanding

- In increasing order, the number on the left is less than the number on the right.
- In decreasing order, the number on the left is greater than the number on the right.

### Application

- Write the following numbers in ascending order:
  - 5, 3, 1, 8
  - 10, 5, 2, 0
- Write the following numbers in descending order:
  - 7, 4, 2, 0
  - 5, 4, 8, 1

### Analysis

Siya, Venu and Tina went to the market and bought 9, 3, 7 and 4 pencils. Arrange the number of pencils bought in ascending order.

### Parents' Connect

Give utensils or cutlery of different types to your child and ask him/her to count each type. Then, arrange them in ascending or descending order.

Content Book Reference: Page 22, 23
Guided Practice: Page 17-18
**Learning Objective**
To explore the concept of ordinal numbers.

**Material Required**
20 A4 size papers (with 1-10 and first, second ... ten written on them)

**Activity**
- Take some school bags.
- Paste cardinal number on one side and ordinal on the other side of the bags.
- Keep the side with cardinal numbers on the front.
- Point to the first bag and ask the students, “How many bags are these?”, “At what position does the bag lie?”
- Stress on the word ‘first’ and simultaneously show the other side.
- For each bag, first say out the number and then the position.
- Inform the students that the positional number are called ordinal numbers.
- Complete the activity by asking questions about the position before or after a given bag.
- Continue the activity with more cardinal and ordinal numbers.

**Associated Concepts**
Numbers with ordinal numbers.

**Application**
- Which is more? Seventh position or seven positions.
- Draw eight circles.
  - Colour last two of them.
  - Colour the second circle.

**Analysis**
There are 12 children standing in a line. Kishor is standing at fifth position from left. What is his position from right?

**Parents' Connect**
- On a driving trip or in a parking lot, ask questions like:
  - Which colour car is first at the traffic signal? Which is in front of the eighth one? etc.
  - Ask questions relating to the position of clothes hung in the cupboard.
Lesson Plan - 1

Grade - 1

NUMBER BONDS

Learning Objective
To make number bonds of different numbers.

Material Required
6 orange beads, number bond sheets

Activity
- Pose the given situation to the students. Reema has 6 oranges. She wants to give it to two people. Ask the students to find how the ways in which she can distribute the oranges.
- Let children discuss the ways in which this can be done.
- Show them the number bond sheet. Ask them to write ‘6’ on it. Tell them that this shows the number of oranges Reema has. Put all the orange beads on this part.

The number bond of each number is one greater than the number itself.

Activity
- Ask the children, “How many oranges will Reema give to the second person if she gives one to the first person?” Reiterate that the number of oranges she has is 6 and she needs to distribute all.
- Conclude that she will give 5 oranges to the second person. Move all five orange beads to the second part.
- Make students observe that the number of beads in both the parts is equal to the part in whole.
- Next, ask “What if Reema gives 2 oranges to the first person?” Move one bead from the second part to the first. Carry on the activity. With each step, write the number bond formed on the board. Continue till all six beads are in one part. Establish that the other part has 0.
- Carry on the activity with other numbers till time permits.

Understanding
Expected

Content Book Reference: Page 28-32

Application
Form the number bonds of 4 and 5.

Analysis
Aruna gave 2 pencils to Siya and 4 to Riya. She was left with no pencils. Show a number bond for the same.

Parents' Connect
Join three plates in the form of a number bond. Practice the concept with different things as fruits and vegetables.

Guided Practice: Page 22-33
### Lesson Plan - 2

**Grade - 1**

<table>
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<th>To make number bonds of different numbers.</th>
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<tbody>
<tr>
<td>Material Required</td>
<td>10 counters/ cubes</td>
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</table>

#### Activity

- Pose the given situation to the students. Aditi had 7 stamps. If she gives away 3 of them to her brother, how many stamps is she left with?
- Ask the students to make the number bonds. Ask the pairs to raise their hands once they are done.
- Ask a pair to tell the number bonds formed.
- Pose similar situations. Ask a group to form the number bonds of the situation posed by you. For each correct answer, applaud the group.
- Next, pose a question. Sheena had 6 erasers and Sonia had 4 erasers. How many erasers do they have in all?
- Ask the students to draw a number bond to represent the situation. Make them observe that they are given two parts and the number bond will complete when they add the parts to find the value of the whole.
- Demonstrate on the board.
- Ask, “Sheena had 6 erasers. She gave 2 erasers to Sonia. How many erasers is Sheena left with?”
- Seek answers and draw the number bond on the board. Carry on the activity using similar situations. With each step, write the number bond formed on the board till time permits.

#### Understanding

- Number bond of each number is one greater than the number itself.
- Number bonds can be used to find parts as well as wholes.

#### Expected

**Associated Concepts**
- Addition and subtraction within 10.

**Application**
- Form the number bonds of 10.

**Analysis**
- Mudit had 9 balls. He gave 3 to Rohit. Form a number bond to show the number of balls left with him.

**Parents' Connect**
- Pose different situations on addition and subtraction within ten and ask your child to form a number bond of the same.
Learning Objective
To make number bonds using number balance.

Material Required
Number balance and weights

Activity
- Show the number balance to the class. Bring it to the attention of the class that the balance has same numbers written on both the sides at equal intervals.
- Choose a number, say 7.
- Hang one weight at number 7 on one side and another of 3 on the other.
- Call out a child and ask him/her to balance it by using a weight.
- Seek responses from the class. Conclude that a weight at number 4 on the side of 3 will balance the number balance. Try other suggestions and show the various combinations by putting two weights at number 2, four at number 1 and so on. Explore all the number bonds of 7.
- Call out children one by one and ask them to try different combinations of numbers. With each combinations being formed, draw a corresponding number bond on the board.
- Continue the activity for various number combinations.

Application
One side of the number balance has a weight on number 4. Write all the number bonds to balance it on the other side.

Analysis
Mudit had 9 balls. He gave 3 balls to Rohit. Form a number bond to show the number of balls left with him.

Parents' Connect
Pose different situations on addition and subtraction within ten and ask your child to form a number bond of the same.
**Learning Objective**
To introduce the concept of addition.

**Stress Words**
Plus, equal, addition

**Activity**
- Ask any two students to tell the number of pencils they have. Say aloud.
- Write both the numbers on the board say, 1 and 3.
- Pose a question, “How many pencils do both the students have in all?”
- Guide the students to count forward from the first number to the second.
- Put the ‘+’ sign between the numbers and an ‘=’ sign before the total and introduce addition of two numbers. Say aloud, “1 plus 3 equals 4”.
- Associate with representation of the number bond.

```
1 + 3 = 4
```

- Carry on the activity taking different numbers, draw number bonds and write addition sentences for each.

**Application**
How many pencils do you and your friend have?

**Analysis**
How would you find the total number of pencils if you have 2 red and 7 green pencils?

**Parents' Connect**
Give a few tomatoes and potatoes to your child and ask them to find out the total number of vegetables.

Content Book Reference: Page 37-39
# Lesson Plan - 2

## Grade - 1

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<td>Stress Words</td>
<td>Add, equal</td>
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</table>

## Activity

- Instruct the students to paste two smileys on a stick, one each at its two end points and record the number.
- Next, instruct the students to paste three smileys on the other stick; one each at the end points and third at the centre.
- Ask them to count the number of smileys on each stick and then the number of smileys in all.
- Bring to their observation that they just ‘added’ the two numbers.
- Instruct them to place the stick with 3 smileys vertically in the middle of the horizontal stick and recapitulate the ‘+’ sign. (Save the resource for later use)
- Write the addition sentence as: 2 + 3 = 5 on the board and say aloud “2 plus 3 equals 5.”
- Repeat the activity for the addition of 4 and 5.

## Understanding

### Expected

The sum of two numbers is called the ‘total’.

## Application

- Add 4 and 5.
- What is equal to 5 plus 5?

## Analysis

- Anu has 3 pencils. She buys 2 more pencils. How many pencils does she have?
- What other symbols/things look like the addition symbol?

## Parents' Connect

While shopping, give your child a few packets of two types of biscuits (or the like) and ask them to find the number of biscuits bought. Encourage them to say the sentence with the right terms.

Content Book Reference: Page 37-39  Guided Practice: Page 34
Lesson Plan - 3

Grade - 1

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<th>To explain the concept of addition by counting forward on the number line.</th>
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<td>Material Required</td>
<td>Number mat upto 10 and counter (to be kept at every number)</td>
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<td>Stress Words</td>
<td>Forward</td>
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Activity

- Draw a number line and write an addition sentence, say 4 + 3 = _____
- Call out a student and ask him/her to stand on first number (4) as given in the addition sentence with the same number of counters in his/her hand.
- Make student observe the addition sentence as well as number 4 on the number line.
- Call out the next number to be added, 3.
- Ask the student to jump forward that many steps, pick up a counter at every jump and count all of them together.
- Simultaneously, make arrows for each jump, circle 7 on the number line and complete the addition sentence.
- Make the students observe that the number of counters in hand and the number where the student ‘reaches’ is the same.
- Represent the same on board and continue for more numbers.

Understanding Expected

We count forward on the number line starting from the first number.

Application

Find Riya’s destination if she is at 5 and jumps 4 times to reach there.

Analysis

What we do when we forward a number to get another number?

Parents' Connect

Practice the concept of count forward by using staircase and asking your child to count forward by hopping the steps to add two numbers.

Content Book Reference: Page 40

Guided Practice: Page 35
# Lesson Plan - 4

## Grade - 1

### Learning Objective
- To practice the concept of addition of two numbers.
- To solve word problems on addition.

### Material Required
- Plus, equal, total, altogether

### Activity
- Inform the students that they are going to watch some maths stories.
- Instruct them to close their eyes and come in front quietly on tapping.
- Tap 6 students and have 2 of them stand outside the class.
- Instruct the students to open their eyes.
- Tell them, “Your 4 friends are standing and 2 more join (call the friends). How many friends are standing altogether?”
- Make students say aloud, 4 friends + 2 friends = 6 friends
- Join your fists horizontally to show ‘altogether’.
- Make students write the addition sentences for similar situations.

### Understanding
- If no more students join further, the second number to be added is zero.

### Expected
- How many doors and windows does the classrooms have in all?

### Application
- If three balls are added to a bag with four balls, how many balls are there in the bag in total?

### Analysis
- Make your child add the number of chairs and tables in your drawing room and find the total.

### Parents' Connect

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**Content Book Reference:** Page 41, 42, 46, 47  
**Guided Practice:** Page 36-38
Learning Objective
- To strengthen the concept of addition of two numbers.
- To explore the addition of three numbers.
- To solve the word problems on addition.

Material Required
Connecting cubes

Stress Words
Total, sum, in all, altogether

Activity
- Begin with an addition story, ”Navya had 2 balloons”. Ask the students to represent 2 by connecting cubes.
- Continue as ”Mehak has 7 balloons”.
- Ask the students to represent 7 by cubes.
- Ask, ”How many balloons do they have in all?”
- Ask the children to join two blocks.
- Associate with representation of bar model.

```
   Navya   Mehak
2 balloons + 7 balloons = In all
```

2 balloons + 7 balloons = 9 balloons

- Continue, ”Mehul had no balloons”.
- Ask the children to find the total number of balloons all the three children have.
- Make students write addition sentence for different situations.

Understanding Expected
Adding 0 does not affect the total or sum.

Application
- Rahul has 4 almonds. His mother gave him 5 more almonds. How many almonds he have altogether?
- If Ruchi adds 2 red and 3 green marbles to 4 yellow marbles, how many marbles does she have?

Analysis
What is the sum of 2 guavas and 0 guavas?

Parents’ Connect
- Take your child to the market, ask them to keep a count and add the number of articles bought from 2 different shops.
- Ask the child to count the total number of bowls/glasses on the dinner table or shelf.

Content Book Reference: Page 41-45
Guided Practice: Page 39, 40, 42-43
Learning Objective
To make addition stories.

Stress Words
How, what, sum, total, in all, altogether

Activity
- Begin with a situation, “Riya has 1 dog”.
- Ask a question after each sentence spoken like, “How many dogs did Riya have?”.
- Tina gifted her another dog on the birthday.
- Ask again, “How many dogs did Tina gift?”
- Stress on 1 dog and 1 dog.
- Pretend on forgetting the story and let the children repeat it.
- Ask them of the sentence that would be said for the total number of Riya has. Ask the students to recall the word you used.
- Associate “How” with “total dogs”, “dogs in all”, “dogs altogether”.
- Say aloud the sentence, “Riya has 1 dog. Tina gifted her another dog on her birthday. How many dogs does she have in all?”
- Form the addition sentence using “total dogs“ and “dogs altogether“, stress on “in all”, “altogether” and “total” as addition keywords.
- Continue with other number stories or objects.
- Practice with different keyword to show the total.

Understanding
- All the keywords (in all, total, sum, altogether) suggest addition.
- When reading a story, making students identify keywords for addition and make them find the total. For example, Snow white and the seven dwarfs were eight people in total.

Application
Make an addition story with “5, 2, fish tank, in all, fishes”.

Analysis
- Will a number story be possible with “6 marbles and in all”? 
- What more information is required?

Parents’ Connect
Make student count on and add the number of advertisements in three intervals while watching television.
# SUBTRACTION TO 10

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>To introduce the concept of subtraction.</th>
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</thead>
<tbody>
<tr>
<td>Stress Words</td>
<td>Minus, equal, subtraction</td>
</tr>
</tbody>
</table>

## Activity
- Stack a pile of, say, 9 books. Ask a student to count and say aloud the number of books.
- Take away 3 books out of the pile, show to the class, count and set aside.
- Write both the numbers on the board.
- Pose questions like, “How many books were there? How many did you take away? How many books were left in the pile?”
- Guide the students to count backward from the first number to the second.
- Put ‘–’ sign between the numbers and ‘=’ sign before the difference and introduce subtraction of two numbers. “9 minus 3 equals 6”.
- Associate with representation of the number bond.

![Number Bond](image)

- Repeat the activity with similar objects in the class and make the children say the subtraction sentences aloud in each case.

## Application
You have 6 pencils. You gave 2 pencils to your friend. How many pencils do you have now?

- How would you find the number of leftover apples if you ate 3 apples out of 6?
- How many apples will be left?

## Analysis

## Parents’ Connect
Put a countable number of spoons in a glass. Ask your child to take away a few. Let the child find out the number of spoons left in the glass without actually counting the left over.

Content Book Reference: Page 54, 55
<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>To introduce the subtraction sign and terms associated with the concept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Required</td>
<td>Plus smiley stickers (made in addition activity)</td>
</tr>
<tr>
<td>Stress Words</td>
<td>Minus, equal</td>
</tr>
</tbody>
</table>

**Activity**

- Remind the students of the smiley ice-cream sticks they had made to learn addition and the plus sign.
- Instruct the students to count the total number of smileys and write the number on the board.
- Ask them to remove the top strip and show 3 smileys being ‘taken away’ and count the number of smileys left. Write the numbers on the board.
- Bring to their observation that they ‘subtracted’ the two numbers. Associate the horizontal stick with the ‘–’ sign.
- Write the subtraction sentence as: \(5 - 3 = 2\) on the board and say aloud, “5 **minus** 3 equals 2”.
- Repeat the activity for the subtraction of 4 from 5.

**Understanding Expected**

- When two numbers are subtracted, the resultant number is called the ‘difference’.

**Application**

- What is equal to 9 minus 4?
- If Reena takes away 7 out of 9 bananas in a plate, how many bananas are left?

**Analysis**

- Find the difference of 7 and 4.

**Parents’ Connect**

- While giving them fruits or snacks to eat, encourage your child to say the subtraction sentence with the right terms.

Content Book Reference: Page 54, 55

Guided Practice: Page 45
# Lesson Plan - 3

**Grade - 1**

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>To explain the concept of subtraction by counting backward on the number line.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Required</td>
<td>Number mat upto 10</td>
</tr>
<tr>
<td>Stress Words</td>
<td>Backward, taken away</td>
</tr>
</tbody>
</table>

**Activity**

- Draw a number line and pose a subtraction problem to the students, say \( 8 - 3 = ____ \)
- Ask a student to stand on number 8. Make students observe the subtraction sentence as well as the number on the number line.
- Inform the students that since 3 is being taken away, they need to go to the left on the number line. Ask the child to hop backwards 3 steps while the other students count each hop aloud.
- Simultaneously, make arrows for each hop, circle number 5 on the number line and complete the subtraction sentence.
- Repeat the activity with different numbers.

**Understanding Expected**

- We move forward to add and backward to subtract two numbers on the number line.

**Application**

- Roshan moves backward 5 steps from 8 on a number line. Write a subtraction sentences for it.

**Analysis**

- What will be the number on the number line for the subtraction sentence: \( 5 - 5 = ____ \)?
- Which number do we start with, on the number line to subtract two numbers?

**Parents' Connect**

- Show a ruler to the child and encourage him/her to find the difference when 4 oranges out of 9 are taken away by counting back.

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Content Book Reference: Page 56

Guided Practice: Page 46
Learning Objective
To explore subtraction by crossing out.

Material Required
Interlinked cubes, square cut-outs of cross drawn on each (size equal to the interlinked cubes)

Activity
- Ask the students to count and arrange the cubes to form a bar according to the number called out, say 5.
- Ask the other student to place cross sign cut-out and hide the cubes according to the minuend, say 2.
- Pose question, “How many cubes are left?”
- Ask the students to count the remaining cubes (without the cross sign) and write the answer i.e. 5 – 2 = 3.
- Represent the same on the board.

Activity
- Carry out the activity for more numbers.
- Number crossed out show the numbers being taken away.

Understanding
- Draw 10 boxes. Cross out 6 of them. How many boxes are not crossed? Write the subtraction sentences for it.

Application
- Ask students to use their fingers to find the difference of:
  » 8 and 3
  » 9 and 5.

Analysis
- Use pencils, crayons etc. to show crossing out and encourage your child to find out the number of biscuits left out of 8 if 6 are taken away.

Content Book Reference: Page 57, 58
Guided Practice: Page 47
### Grade - 1

<table>
<thead>
<tr>
<th>Lesson Plan - 5</th>
</tr>
</thead>
</table>

| Learning Objective | • To perform subtraction of two numbers.  
|                   | • To solve word problems on subtraction of 2 numbers. |
| Material Required  | Marbles (10 per pair) |
| Stress Word       | Left, taken away |

#### Activity
- Pose a situation, ”I have 10 marbles and I give away 4 marbles to ____.”
- Call out a student and give away 4 marbles to him. Show and count each marbles as they are given away.
- Hide the marbles left and ask ”How many marbles am I left with?”.
- Ask the students to calculate the answer from the marbles with them and find the answer.
- Write along the subtraction sentences on the board and say aloud marbles you ‘**had**’, marbles you ‘**gave away**’ and marbles ‘**left**’.
- Repeat with other situations and numbers.

#### Application
- Shreya gave away 6 pens out of 7 she had. How many are left with her?

#### Analysis
- How do you know that you need to subtract? Which words suggest subtraction?

#### Parents' Connect
- Show a bunch of bananas to your child and ask him/her to count them. Take out a few bananas from the bunch and ask you child to find the number of bananas left.

---

Content Book Reference: Page 59-62

Guided Practice: Page 48-51
<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>To form subtraction stories from clues given.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Required</td>
<td>A box, 9 candles, clue slips</td>
</tr>
<tr>
<td>Stress Words</td>
<td>Left, less</td>
</tr>
</tbody>
</table>

### Preparation

- Write situations using objects on A4 size sheets and fold them. For example, 4, 9, eggs, broken; 8, 4, cherries, eaten, left.

### Activity

- Place candles horizontally on a table and light them.
- Tell the students to count. (9)
- Blow a few candles (say 5). Say aloud, "How many candles you did I blow?"
- Write 9, 5 and blew on the board.
- Encourage the students to form a subtraction story as they did in addition.
- Write 'left' on board and seek answers.
- There were 9 candles. You blew 5 of them. How many candles are left?
- Stress on words 9, 5, blew and left.
- Next, pair students sitting next to each other.
- Call random students and ask them to take out a clue slip, open it and show it to the class.
- Each pairs then form subtraction stories from the clues.
- Continue the activity till time permits.

### Application

- Form a subtraction story from "6, puppies, 3, out, home". Also write the subtraction sentences for the story.

### Analysis

- What is 7 less than 9?
- How did you know which operation to perform?

### Parents' Connect

- Practice clue stories when your child has eaten a few items, like biscuits. Use wrappers to show left overs and encourage them to form subtraction sentences using correct subtraction vocabulary.

Content Book Reference: Page 63, 64
Guided Practice: Page 52-54
NUMBERS 11 TO 20

Learning Objective
- To read, count and write numbers from 11 to 20 in figures and words.
- To identify numbers that come before, after and between given numbers.

Material required
Connecting cubes

Stress Words
Tens, ones, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty

Activity
- Divide the class into groups of 4.
- Give 20 connecting cubes to each group.
- Instruct the students to form a tower of 10 using the connecting cubes.
- Make a tower of 10 side by side to demonstrate.
- Tell them:
  » It is easier to count numbers by making a group of 10.
  » A group of 10 is called a ‘ten’.
  » The loose connecting cubes are called ones.
- Hold the tower of 10 cubes in one hand and one more cube in the other hand.
- Say: one 10 and one 1 is 11.
- Write on the board:

```
 10
1 11
```

Eleven

- Instruct the students to show a ten in one hand and one cube in one hand and say eleven.
- Pick up one more cube in the hand with one cube.
- Say: one 10 and 2 ones is 12.
- Write on the board:

```
10
2 12
```

Twelve

- Instruct the students to show a ten in one hand and 2 ones in the other hand and say twelve.
- Continue like this till nineteen. Instruct the students to take a ten in one hand and 10 ones cubes in the other hand.
- Ask the students if these 10 one cubes can be connected to form a ten too.
- Show the students that one ten has 10 ones.
- Instruct the students to form another ten.
- Show 2 towers of tens and say 2 tens is 20. It has 0 ones.
- Write on the board:

```
  10

  10    20
```

- Repeat the counting by counting different objects.
- Encourage the students to also spell the number name after telling the count.
- Count the numbers from 1 to 20 with the students one more time.
- Point to each number on the board while calling it aloud.
- Use the terms before, after and between to show the counting sequence to the students. For example:
  » 11 comes just after 10. 12 comes just after 11. 13 comes just after 12 and so on till 20.
  » 19 comes just before 20. 18 comes just before 19. 17 comes just before 18 and so on till 10.
  » 19 comes between 18 and 20, 18 comes between 17 and 19 and so on.
- Show the students:
  » The number that comes just after is the next number in the counting.
  » The number that comes just before is the previous number in the counting.
  » The number that comes in between is the number that comes after the first number.
- Call out different numbers from 11-20 and ask the students to tell the numbers before, after and between.
- Encourage them to show the answer using connecting cubes.
- Continue as time permits.

- After 10, the counting continues using tens and ones.
- The number that comes next is ‘just after’ the previous number.
- The previous number is the number that comes ‘just before’.
- The number that comes between two numbers comes ‘just after’ the first number.

**Count and write how many.**

```
  »

  »
```

**Write the numbers in words.**

```
  » 14 ____________  » 12 ____________  » 20 ____________
```
Analysis

- Complete the counting.
  
  11, 12, ____, 14, _____, _____, 17, _____, 19, ____.

- How many tens and ones are there in the following.
  
  » 15
  » 20

Parents' Connect

- Give a random number of rajma beans from 11-20. Ask your child to make groups of 10, tell the number of tens and ones, the count and the number name in words.

- Take your child for a walk. Encourage him to count different types of items like cars, trees, flowers etc.
Learning Objective: To compare and order numbers from 11 to 20.

Material Required: Connecting cubes

Stress Words: Greater, smaller, ascending, descending

Activity:
- Draw a number line from 11 to 20 on the board.
- Write the numbers on it based on students’ response.
- Ask the students: Mona made a tower of 12 blocks. Tina made a tower of 14 blocks. Whose tower will be longer? Why?
- Circle 12 and 14 on the number line.
- Divide the class into groups of 4.
- Give 40 connecting cubes to each group.
- Instruct the groups to make one tower of 12 blocks and another tower of 14 blocks.
- Show the students that the tower with 14 blocks is longer because it has 2 more blocks.
- Tick 14 on the number line.
- Write on the board: 14 > 12.
- Remind the students that the comparison symbol is like mouth of a hungry crocodile. Its mouth will always be open towards the bigger number.
- Repeat the activity with different set of numbers from 11-20.
- Use the number line every time to show the students that the number that comes first in the counting is smaller. For example, between 17 and 20, since 17 will come first, 17 is smaller and 20 is greater.
- Call out different numbers from 11-20 and encourage the students to tell which is greater using counting.
- Make 2 towers of 13 connecting cubes each.
- Ask the students which has more.
- Count the connecting cubes in each tower.
- Write on the board: 13 = 13.
- Show them that when we are comparing same numbers, they are equal.
- Write 16, 20 and 14 on the board.
- Pick students to make towers of these many blocks in front of the class.
- Ask the students to look at the towers and tell which number is smaller, which is the next smaller number and then the greatest number. Write 14, 16 and 20 on the board and mark them on the number line.
- Show the students that these numbers are arranged in order from smallest to greatest.
• Explain:
  » When numbers are arranged in order from smallest to greatest, they are in ascending order.
  » When numbers are arranged in order from greatest to smallest, they are in descending order.
• Use the number line to show the students that just like comparing, they can also count to arrange the numbers in ascending or descending order. The number that comes first will be the smallest, the number that comes last will be the greatest.
• Call out 3–4 numbers from 11–20 and instruct the students to arrange them in ascending or descending order using counting.
• Verify their answer by making towers of as many connecting cubes and arranging them in order.
• Continue as time permits.

The number that comes first in counting is smaller.

• Fill in the blanks using <, > or =.
  » 12 ____ 19
  » 18 ____ 18
  » 20 ___ 10
• Arrange 15, 12 and 20 in ascending order.
• Arrange 13, 19 and 16 in descending order.

• Fill in the blanks using numbers from the brackets.
  » 15 > ___ (13/17)
  » 14 < _____ (11, 15)
  » 17 = ____ (16/17/18)
• Write true or False.
The numbers below are arranged in ascending order.
  14, 17, 19, 20

• Encourage the child to count different types of objects around the house like plates and bowls, lights and fans, pencils and notebooks etc. and tell which is more.
Learning Objective
- To add numbers up to 20 with sum less than 20.
- To solve word problems on addition of numbers to 20.

Material Required
Connecting cubes, number line

Activity
- Narrate: Rohit has 4 cubes. Karan has 13 cubes. How many cubes do they have in all?
- Ask: How will you solve this problem?
- Remind them that addition is putting together.
- Explain to them that we need to put together Rohit’s and Karan’s cubes to see how many they have. Thus, we need to add the numbers.
- Explain using a model on the board:

```
13 Cubes
[13 cubes]
\[\text{？}\]
4 Cubes
[4 cubes]
```
- Divide the class into groups of 4.
- Give 20 cubes to each group.
- Instruct the students to put together Rohit’s and Karan’s cubes to find how many they have in all.
- Demonstrate using number line and column method on the board after students answer.

```
\[\begin{array}{c}
\text{T} \\
13 \\
\hline
\text{O} \\
3 \\
\hline
\text{？} \\
13 & + & 4 \\
\hline
17 \\
\end{array}\]
```

- Repeat the activity for the following problems.
  » Anandi has 12 dolls. Anita has 5 dolls. How many dolls do they have altogether?
  » Kanika has 16 pens. Her sister has 3 pens. How many pens are there in all?
- Show the students that we can also add numbers using the number line and column method.
  » To use a number line, we mark the bigger number. Count forward as many numbers as the smaller number being added. The number we reach is our answer.
  » To use the column method, we write the numbers one below the other then add the numbers by counting forward and write the sum below them.
There are 11 Hindi books and 5 English books. What is the total number of books?

Sheena has 15 blue balls and 5 red balls. How many balls does she have in total?

Write the addition sentence for the addition shown below.

There are 15 balls in a basket. Rishi put 2 more. How many balls are in the basket now?

Engage your child whenever you need to put together objects like utensils, clothes etc. For example, there are 10 plates on the shelf. Ask your child to put 4 more and find how many there will be in all.

Have your child count the number of white and silver cars at the red light, add the numbers by counting forward and verify by counting cars in both colours together.
Lesson Plan - 4

Grade - 1

Learning Objective
- To subtract numbers up to 20.
- To solve word problems on subtraction of numbers to 20.

Material Required
Connecting cubes, number line

Activity
- Narrate: Aditi made a tower of 15 cubes. 4 of the cubes fell. How many cubes are left in the tower?
- Ask: How will you solve this problem?
- Remind them that subtraction is taking away.
- Explain to them that since 4 cubes fell from the tower, we need to take away 4 cubes from 15 cubes to find how many cubes are left on the tower.
- Explain using a model on the board:

```
15 Cubes
\[\begin{array}{cccccccccccc}
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 & 15 \\
\end{array}\]
\[\begin{array}{cccccccccccc}
\times & \times & \times & \times & \times & \times & \times & \times & \times & \times & \times & \times & \times & \times \\
\end{array}\]
\[\begin{array}{cccccccccccc}
\end{array}\]
4 Cubes
```

- Divide the class into groups of 4.
- Give 20 cubes to each group.
- Instruct the students to make a tower of 15 cubes and take away 4 of them.
- Ask them to count the cubes left in the tower and answer.
- Demonstrate using number line and column method on the board after students answer:

```
<table>
<thead>
<tr>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
</tr>
</tbody>
</table>
```

15 - 4 = 11

- Repeat the activity for the following problems.
  » There were 18 mangoes. Avi ate 6 of them. How many mangoes are left?
  » Ashi has 16 pens. She gave 3 pens to her sister. How many pens are left with her?
- Show the students that we can also subtract numbers using the number line and column method. To use a number line, we mark the bigger number. Count backward as many numbers as the smaller number being subtracted. The number we reach is our answer.
  » To use the column method, we write the numbers smaller number below the bigger number. We subtract the numbers by counting backward and write the answer below them.
There are 12 glasses of water on the table. Guests drank 3 of them. How many glasses of water are left?

Mahesh had 17 stickers. He pasted 6 of them on his notebook. How many stickers are left?

Kanika’s has 18 pencils. Her sister has 3 pencils. How many more pencils does Kanika have as compared to her sister?

Ashok has 18 comic books. 8 of them are in Hindi and remaining in English. How many comic books are in English?

Ashu is subtracting 0 from 19 on the number line. How many numbers will he jump backwards and what is the answer?

Numbers can be subtracted by taking away objects, counting backward on number line as well as using column method.

Whichever method we use to subtract, the answer will be the same.

Verify their answer by taking away cubes with them after they finish.

Show them that whichever method they use, they will get the same answer.

Continue as time permits.

Engage your child in activities that involve taking away. For example, your child has 12 dresses. 3 of them have been put away for washing. How many dresses are left?

Ask your child to count different items around the house like plates, spoons, tables, chairs etc. and find how many more of one type are there as compared to another.
Learning Objective
To solve word problems on addition and subtraction of numbers up to 20 (sum less than 20).

Activity
- Write the following problems on the board:
  » 16 birds were sitting on a tree. 4 of them flew away. How many birds are left?
  » There are 6 apples in one basket and 7 apples in the other. How many apples are there in all?
  » Mohan has 20 pens. He gave 4 of them to his brother. How many pens left with him?
  » Ajay has 12 chairs in his house. He bought 6 more chairs. How many chairs are there altogether?
- Ask the students:
  » How will you solve these problems?
  » How do you know whether to use addition or subtraction?
  » Share with the students:
    » There are some words in the problem that indicate whether we should use addition or subtraction.
    » Words like in all, altogether, total indicate that we should use addition.
    » Words like left, how many more, how many less indicate that we should use subtraction.
- Explain further:
  » Understand what is happening in the problem.
  » See whether what is happening will increase the number or decrease it.
  » If the number will increase, we have to add.
  » If the number will decrease, we have to subtract.
- Discuss each problem one by one.
  » In the first problem, some birds flew away. So the number of the birds on the tree will become less. Hence, we have to subtract.
  » In the second problem, when we count apples together the number will increase. So, we will add.
  » In the third problem, Mohan gave some pens to his brother so the number of pens with him will become less. So we have to subtract.
  » In the fourth problem, buying more chairs will increase the number of chairs in the house. So we will add.
- Divide the class into pairs. Instruct each pair to solve the problems on the board.
• Solve the problems on the board with the students after they finish.
• Encourage the students to suggest more situations where the number of items will increase and decrease.
• Ask the students to tell whether they will add or subtract in the situation.
• Continue as time permits.

If the number will increase, we will add. If the number will decrease, we will subtract.

**Application**

• There are 18 pages in a notebook. Manish tore out 3 of them. How many pages are left in the notebook?
• Karan has 4 stickers. He bought a pack of 12 more stickers. How many stickers does he have in all?
• There are 15 pens in a box. 5 of them are not working. How many pens are working?
• There are 12 boys and 6 girls in a class. How many children are there in the class?

**Parents' Connect**

• Take your child to count the fruits and vegetables in the refrigerator. Ask him whether he will add or subtract to find their total count and to find how much more there are.
• Point out different situations to your child which result in increasing or decreasing count for example, having soaps and buying more, eating *chapattis* and finding how many left etc. and show how the count will increase or decrease as a result of these actions thus telling them whether they should add or subtract.

Content Book Reference: Page 86-91
Guided Practice: Page 68-70
## Lesson Plan - 1

### Grade - 1

### NUMBERS 20 TO 100

#### Learning Objective
- To count numbers from 21 to 29
- To read and write numbers and number names from 21 to 29.

#### Material Required
- Number cards from 21 to 29, Stop Watch

#### Stress Words
- Number, Number names, Tens, Ones

#### Activity
- Tell the students they are already familiar with the numbers from 1 to 20.
- Inform them now they will learn bigger number and number names up to 29 today.
- Write the numbers from 21 to 29 on the board, you can read them in chorus with your class.
- Start with 21 and read the number aloud 3 times with the class. Continue this with all the numbers.
- Now read aloud (21, 22, 23, etc.) and run through from 21-29 a few times, each time reading the numbers out faster and faster.
- Now, put your class into two groups say group A and group B. Have each group practice by saying the numbers aloud together (e.g. A: 21, B: 22, A: 23, B: 24, etc.).
- Encourage the students to say aloud numbers. Applaud their efforts.
- Now divide the class into groups of 5 students.
- Call one group at a time and ask them to stand around the centre table.
- Spread number cards from 21 to 29 on the centre table. So that each group member can see all the cards placed on the table clearly.
- Explain the rules for the activity to the students.
- Tell the students you will call out any 5 numbers between numbers from 21 to 29.
- The student closest to you needs to pick that number card and stand up. The next student will pick up the next number you call out. This will continue until all the five numbers have been called out. Once all the 5 numbers have been called out and all the group members are able to pick up the right number card within 2 minutes of time, they will shout Bingo and win the game.
- Start the stop watch.
- Now randomly call out the numbers to them i.e. 21, 25, 29, 24, 22.

### Class, Group, Activity
• Ask the students to pick the numbers card quickly and stand up. Tell the students this is a time based activity. If they pick up the right cards within the said time, they will win the game.
• Repeat this activity with each group.
• Now draw two columns on the board. In the left column write the number 20 and in the right side column write the number name i.e. twenty.
• Continue to write the numbers on the board from 21 to 29 in column A and ask the students to write their number name in column B.
• Students understand that the number on the left of a two digit number tells the number of groups of 10. The number on the right tells the number of single things, or units or ones.
• Give abundant practice in number names.

Students can read and write numbers and number names from 21 to 29 independently.

Understanding
Expected

Application

• There are 15 chairs and 9 tables in your classroom. Count and find the total number of chairs and tables in the classroom.
• There are 17 children are there in the school van. 7 more join them. How many children are there in the van?

Analysis

• Write the numbers:
  » 2 tens and 3 ones = _____
  » 2 tens and 0 ones = _____
  » 2 tens and 9 ones = _____
• Write the numbers by counting backward.
  29, ___, ___, ___, ___, ___, ___, ___, 21

Thinking Skills

• 5 added to makes me 22. What number am I?
• I have as many tens as the number of ears you have and as many ones as the numbers of nose you have? Guess, which number I am?

Parents’ Connect

• Help your child perform the following activity. Ask your child to call out numbers from 1 to 29 so that he/she become familiar with the sound.
• Ask him/her to write the number and number names from 20 to 29 in his/her notebook and conclude.

Content Book Reference: Page 95
Guided Practice: Page 71
Learning Objective
- To count numbers from 30 to 49.
- To read and write numbers and number names from 30 to 49.

Material Required
4 blue counters and 9 red counters

Stress Words
Thirty, Forty

Activity
- Tell the students, they have learned to read, write and recognize numbers from 1 to 29. Now they will learn to read, write and recognize numbers from 30 to 49.
- Write the numbers from 30 to 49 on the board.
- Ask the students to say the numbers aloud with you.
- Start with 31 and start a chorus in the class. Continue with all the numbers.
- Divide the class into groups.
- Make two piles, one with 4 blue counters and the other with 9 red counters on the teachers’ table.
- Call the students in groups to come forward and stand around the teacher’s table.
- Tell the students the red counters represent ones and the blue counters represent tens.
- Ask the students to pick up some counters from both the piles then tell you which number they form. For example: Suppose a student picks 3 blue and 6 red counters, it means he/she has formed the number 36.
- Draw the table on the board as shown and ask them to write the number name of the number also in their notebook.

<table>
<thead>
<tr>
<th>Blue (Tens)</th>
<th>Red (Ones)</th>
<th>Number 36</th>
<th>Number names</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>6</td>
<td>36</td>
<td>Thirty-six</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>48</td>
<td>Forty-eight</td>
</tr>
</tbody>
</table>

- Repeat this activity with each group.
- Tell the students now we will practice with number names.
- Write the spellings on the board and tell the students to memorise these spellings and write them in their notebook.
• Now draw two columns on the board. In the left column write the number 30 and in the right side column write the number name i.e. Thirty.

• Continue to write the numbers on the board from 31 to 49 in column A and ask the students to draw the table in their notebook and write the number name from 30 to 49 in column B.

• Give abundant practice in number names.

• If the task is incomplete within the allotted time period, tell the students to complete it as Home Task.

Students can read and write numbers and number names from 30 to 49 independently.

• Saumya has 24 pencils. Mohan give her 7 more pencils. How many pencils does she have in all now? Count and write in your note book.(31 pencils)

• Neha has 4 boxes of 10 crayons each and 7 loose crayons. Neeru has 4 boxes of 10 crayons each and 5 loose crayons. Who has less crayons? (Neeru has less crayons)

• Fill in the missing numbers.

<table>
<thead>
<tr>
<th>30</th>
<th>34</th>
<th></th>
<th>39</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td></td>
<td>47</td>
<td></td>
</tr>
</tbody>
</table>

• Which is the greater number?
a) 32 or 23    b) 43 or 34    c) 12 or 21

• Match the following:

<table>
<thead>
<tr>
<th>34</th>
<th>4 tens 4 ones</th>
<th>Forty-one</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>3 tens 9 ones</td>
<td>Thirty-nine</td>
</tr>
<tr>
<td>41</td>
<td>3 tens 4 ones</td>
<td>Thirty-four</td>
</tr>
<tr>
<td>39</td>
<td>4 tens 1 one</td>
<td>Forty-four</td>
</tr>
</tbody>
</table>

• Circle the biggest number.

• Help your child perform the following activity.

• Ask your child to call out numbers from 1 to 49 so that he/she become familiar with the sound.

• Ask your child to write the forward and backward counting from 1 to 49 in their notebook and conclude.
Lesson Plan - 3

Grade - 1

Learning Objective
To compare numbers from 20 to 49.

Material Required
Make 10 chits by writing numbers randomly from 20 to 49.

Stress Words
Increasing, Decreasing, Before, After Between, Greatest, Smallest, Greater, Smaller.

Activity

- Ask students Ramesh has 25 flowers and Pintu has 9 flowers. Who has more flowers? How do they know? Seek responses.
- Tell the students a 1-digit number is always smaller than a 2-digit number.
- Make 10 chits by writing random numbers from 20 to 49 on them. Keep the chits in a bowl and call 10 students in a group to pick up the chits.
- Ask the student to pick one chit each and stand in proper sequence.
- You can assess their understanding of sequence.
- Repeat this activity with each group of 10 students.
- Write any 2-digit number on the board e.g. 26.
- Ask: How many of you can tell which number comes before it and which number comes after it? Raise your hand.
- Seek responses and note on the board. Repeat this activity 5-6 times using different 2-digit numbers.
- Ask the students to say aloud the numbers from 20 to 49 in increasing and decreasing order with you.
- Tell the students increasing order means arranging numbers from the smallest to the biggest and decreasing order means arranging numbers from the biggest to the smallest.
- Now write 2 numbers on the board such as 21 and 33.
- Ask the students which number is greater?
- Ask the students which number is less?
  Seek response (33 is greater and 11 is less.)
- Now write 3 numbers on the board such as 38, 49, and 20.
- Ask the students which number is greatest; which number is smallest.
- Discuss the concepts of greatest and smallest number.
- Tell the students that we can compare numbers by looking the digits in tens and ones place.

Understanding Expected
Students will understand a 2-digit number is always bigger than a 1-digit number. If both numbers have 2-digits, compare the digits at the tens place. If both numbers have the same digits at the tens place, compare the digits at the ones place.
**Application**

- Sunil is fond of reading books before going to bed. He is reading page 44 of a book.
  - Which page will he read after reading page 44? (45)
  - Which page did he read before reading page 44? (43)

- Sohan, Kunal and Anil are the students of class 1B. They started walking along the length of the sidewalk in the school playground. Suraj walked 35 steps, Kunal walked 43 steps and Anil walked 29 steps. Who walked more steps? (Kunal)

**Analysis**

- Write the number just before and after the given numbers.
  - ___34___ (33, 35)
  - ___45___ (44, 46)
  - ___29___ (28, 30)

- Arrange the number in increasing order.
  - 39, 49, 29, 19 = ____ , ____, ____, ___ (19, 29, 39, 49)
  - 35, 9, 18, 40 = ____ , ____, ____, ___ (9, 19, 35, 40)

**Thinking Skills**

- Which is greater, 4 tens or thirty-one ones? Think and Answer. (4 tens)

- Arrange the numbers in increasing order.
  - 3 tens 5 ones, 40 ones, 4 tens 3 ones, 2 tens 4 ones, 1 ten 4 ones, 1 ten. (1 ten, 1 ten 4 ones, 2 tens 4 ones, 3 tens 5 ones, 40 ones, 4 tens 3 ones)

- Help your child perform the following activity.
- Ask question to your child such that:
  - What comes after 21? (22)
  - What come before 30? (29)
  - Which number comes between 23 and 25? (24)

- Ask your child to count the number of pages in his/her Mathematics book and English book and give you the answer that which book has more pages?

**Parents’ Connect**

- Ask question to your child such that:
  - What comes after 21? (22)
  - What come before 30? (29)
  - Which number comes between 23 and 25? (24)

- Ask your child to count the number of pages in his/her Mathematics book and English book and give you the answer that which book has more pages?
**Learning Objective**
- To count numbers from 50 to 69.
- To read and write numbers and number names from 50 to 69.

**Material Required**
Icecream sticks

**Stress Words**
Fifty, Sixty

**Activity**
- Divide the class into groups.
- Tell them to make 5 bundles with 10 icecream sticks/spoons in each bundle.
- Ask the students to keep aside these 5 bundles of icecream sticks on the table.
- Tell them that the five bundles together make 50 and then count the rest of the loose icecream sticks one at a time i.e. 51, 52, 53,... till 60.
- Tell the students now they have a collection of 10 loose sticks and using these 10 loose sticks they can make one more bundle.
- Ask: Count how many bundles of icecream sticks you have now (6 bundles).
- Tell them that the six bundles together make 60 and then count the rest of the loose icecream sticks one at a time i.e. 61, 62, 63,... till 69.
- Now write the numbers from 51 to 69 on the board.
- Read aloud with the class each number in turn (51, 52, 53, etc.) and run through from 51-69 a few times; each time going a little faster and faster.
- Tell the students to write numbers from 51 to 69 in their notebook.
- Now, put your class into two groups say group A and group B.
- Have each group practice saying the numbers together (e.g. A: 51, B: 52, A: 53, B: 54, etc.
- Now draw two columns on the board. In the left column write the number 50 and in the right side column write the number name i.e. fifty.
- Continue to write the numbers on the board from 51 to 69 in column A and ask the students to write their number name in column B.
- Give abundant practice in number names.
- If the task is incomplete within the allotted time period, tell the students to complete it as home task.

**Understanding Expected**
Students can read and write numbers and number names from 50 to 69 independently.
Analysis

- Fill in the missing numbers.

<table>
<thead>
<tr>
<th>50</th>
<th>54</th>
<th>57</th>
<th>59</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62</td>
<td>65</td>
<td>68</td>
</tr>
</tbody>
</table>

- Complete the table.

<table>
<thead>
<tr>
<th>Number</th>
<th>Number Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>Fifty-Seven</td>
</tr>
<tr>
<td>65</td>
<td>Sixty-nine</td>
</tr>
<tr>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Thinking Skills

- Reena had 45 crayons. Her father gave her 15 more. She gave 15 crayons to her sister. How many crayons does she have now? (45 crayons)
- Deepti has 5 bunches of 10 grapes each and 6 loose grapes. Preeti has 6 bunches of 10 grapes each. Who has more grapes? (Preeti has more grapes)

Parents’ Connect

- Help your child perform the following activity.
  Give your child more than 70 beads/pebbles ask him/her to count the 65 beads/pebbles and keep them aside.
- Ask him/her to write the number and number names from 50 to 69 in his/her notebook and conclude.

Content Book Reference: Page 102, 103
Guided Practice: Page 77-78
<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>To count numbers from 70 to 100.</td>
<td>Tell the students, they have learned numbers from 50 to 69. Now they will learn numbers from 70 to 99.</td>
</tr>
<tr>
<td>To read and write numbers and number names from 70 to 100.</td>
<td>Now write the numbers from 71 to 99 on the board, tell the students to say the numbers aloud with you. You can say them in a chorus with your class.</td>
</tr>
<tr>
<td>Material Required</td>
<td>Start with 71 and read the numbers aloud with the class. Continue with all the numbers till 100.</td>
</tr>
<tr>
<td>Chalkboard</td>
<td>Tell the students to write the numbers from 71 to 99 in their notebooks and show to you.</td>
</tr>
<tr>
<td>Stress Words</td>
<td>Tell the students now you have learnt numbers up to 99.</td>
</tr>
<tr>
<td>One-hundred</td>
<td>Ask: Do you know which comes after 99 or what is 1 more than 99?</td>
</tr>
<tr>
<td></td>
<td>Seek responses.</td>
</tr>
<tr>
<td></td>
<td>Explain the students on the board that 99 means 9 tens and 9 ones, if we get one more, then we get 9 tens and 10 ones. Again 10 ones = 1 ten</td>
</tr>
<tr>
<td></td>
<td>So, 9 tens and 1 ten = 10 tens = 100</td>
</tr>
<tr>
<td></td>
<td>Tell the students numbers from 10 to 99 are 2-digit numbers. 100 is the smallest 3-digit number. It is read as one-hundred.</td>
</tr>
<tr>
<td></td>
<td>Divide the class into pairs Say partner A and partner B.</td>
</tr>
<tr>
<td></td>
<td>Write any number on the board say 93.</td>
</tr>
<tr>
<td></td>
<td>Call partner A from a pair to the board and ask him/her to write the number name of the given number.</td>
</tr>
<tr>
<td></td>
<td>Ask partner B-“Is it correct?”</td>
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<tr>
<td></td>
<td>Ask partner B to point out if any spelling mistakes have been made.</td>
</tr>
<tr>
<td></td>
<td>Repeat this activity with each pair.</td>
</tr>
<tr>
<td></td>
<td>On conclusion write on the board: 100 ones = 10 tens = 1 hundred. 10 is the smallest 2-digit number and 99 is the greatest 2-digit number.</td>
</tr>
</tbody>
</table>

Students can read and write numbers and number names from 70 to 100 independently.

<table>
<thead>
<tr>
<th>Understanding Expected</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I saw 22 sparrows and 53 parrots. Count and tell how many birds did I see in all? (75 birds)</td>
</tr>
<tr>
<td></td>
<td>In a school library, there are 56 books on mathematics and 35 books in English. How many books are there in all in the library? (91 books)</td>
</tr>
</tbody>
</table>
Analysis

- Count backward and write the missing numbers.
  
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>99</td>
<td>98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>77</td>
<td></td>
<td>71</td>
</tr>
</tbody>
</table>

- Form the numbers from the given tens and ones.
  » 6 tens and 2 ones = ___
  » 7 tens and 6 ones = ___
  » 8 tens and 7 ones = ___
  » 6 tens and 8 ones = ___

Thinking Skills

- In a toy shop there are 75 footballs. How many more footballs need to be shopkeeper to have 95 footballs? (20 footballs)
- Look at the jumbled words. Get the correct number names and write the corresponding numbers.
  » NEYINT-NEO __________________ (NINETY-ONE, 91)
  » YFORT-EVSNE__________________ (FORTY-SEVEN, 47)

Parents’ Connect

- Help your child perform the following activity.
- Ask your child to write the number from 1 to 100 in his/her notebook and show to you.
- Give 100 loose icecream sticks/spoon or matchsticks to your child and ask him/her to count and make a bundle of sticks in which 10 sticks in each bundle. Ask how many bundles he/she have made?
Lesson Plan - 6

Grade - 1

Learning Objective: To compare numbers from 50 to 100

Material Required: Chalkboard

Stress Words: Three digit number

Activity

- Ask: Chintu has 43 chocolates and Mintu has 87 chocolates. Who has more chocolates? How do you know that? Seek responses.
- Tell the students in 2-digit numbers always start comparing the numbers from the tens place and then move to ones place.
- Divide the class into pairs—say partner A and partner B.
- Write on the board: 73, 81, 71, 92, 70 and tell partner A to arrange the given numbers in increasing (ascending) order and tell partner B to arrange these numbers in decreasing (descending) order in their notebooks.
- Go around and help them as required and look at their work while they are doing it in their notebook.
- Now divide the class into groups.
- Make slips of papers with different types of questions based on numbers from 20 to 100 such as: write number before 54; write number after 28, write the number between 67 and 69, which is greater 36 or 63, which is less 25 or 52 etc.
- Distribute 2 slips to each group.
- Ask the students to solve the questions written on their slips and to write them into the notebook and show it to you.
- Go around and help them as required.
- Write on the board as shown and ask the students by using the sign <, > or = tell which number is bigger and which number is less?
  » 87 ____ 72
  » 11 ____ 100
  » 22 ____ 22
- Seek responses.
- To conclude, tell the students always remember that the crocodile always open his mouth towards the bigger number.

Understanding

Expected

100 is always bigger than any 2-digit number because it has three digits.
**Application**

- Ravi has collected 54 stamps, Sonam has collected 78 stamps and Kavya has collected 39 stamps. Write the numbers in ascending order.
- Sohan bought 100 pebbles, Ramya bought 96 pebbles and Siva bought 63 pebbles. Who among the three bought the least number of pebbles? (Siva)

**Analysis**

- Rewrite the numbers in decreasing order.
  - 42, 52, 34, 72
  - 22, 24, 69, 37
- Tick (✓) the smallest number and cross out (✗) the biggest number.
  - 28, 82, 48
  - 50, 25, 74
  - 79, 98, 89

**Thinking Skills**

- Ask your child: Ravi is fond of reading. He read 65 pages son Monday and 56 pages on Tuesday. On which day he read more number of pages? (Monday)
- What is the smallest number formed using the digits 2 and 8? (28)

**Parents’ Connect**

- Help your child perform the following activity.
- Ask question to your child such that:
  - What comes after 99? (100)
  - What come before 90? (98)
  - Which number comes between 78 and 80? (79)
- Which is greatest? 52, 98, 89 (98)
- Which number is smaller–89 or 98? (89)

Content Book Reference: Page 109-110
Guided Practice: Page 84-85
Learning Objective: To count the numbers up to 100 through skip counting of 2s, 5s and 10s.

Material Required: Pebbles/beads

Stress Words: Skip Counting

Activity:
- Put some beads/pebbles on the table and ask “Who can count the pebbles/beads the fastest?”
- Most likely, a student will count by ones to accomplish this task. Next, ask, “Is there an easier/faster way to count beads/pebbles. Seek responses.
- Demonstrate the students that how they can count faster using the skip counting of 2s, 5s and 10s.
- Now ask one student to stand and say a number, for example 21. Ask him/her to start from that number and count up to next 5 numbers.
- Now ask another students to count from there (26) and stop after 5 numbers. Repeat the same with the students and tell them they have counted in 5s.
- Tell the student to say aloud the numbers staring from 2 and skip the next number then say aloud the number and then skip the next number.
- Let students try and give you the answer as 2, 4, 6, 8, 10, 12 ... and so on.
- You can draw a number line on the floor and ask one of the students to start jumping from 2 and to jump on to every second number. He/she can call out the number he/she is on.
- Tell the other students to write the numbers called out in their notebooks and show them to you.
- Tell the students this is skip counting of 2.
- Similarly, tell the students to say aloud the numbers staring from 5 and to skip the 4 next numbers and say aloud the next number and then skip the next 4 numbers.
- Let them answer you by saying 5, 10, 15, 20, 25 ... and so on.
- Similarly teach skip counting of 10 till 100.
- Ask the students to recite skip counting: such as 2, 4, 6, 8, 10, 12....; 5, 10, 15, 20, 25..... and 10, 20, 30, ...
- You can set a tune: it makes them learn faster.

Understanding Expected:
Students will learn that skip counting is faster than counting by ones.
Analysis

- Fill in the missing numbers.
  
  \[
  \begin{array}{cccc}
  2 & 4 & \_ & \_ \\
  3 & \_ & 9 & \_ \\
  5 & \_ & 15 & 20 \\
  \_ & \_ & \_ & 30
  \end{array}
  \]

- Counted in 10s and write the next three numbers of each of the following?
  a) 23  b) 56  c) 17  d) 49

Thinking Skills

- Complete the following pattern:
  » 64, 66, 68, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_, \_
### Activity
- Recall addition of one digit numbers with the students.
- Write few questions on the board such as:
  \[ 4 + 5 = \_, 6 + 2 = \_, 3 + 0 = \_. \]
- Appreciate if the students give correct answers; here, 9, 8 and 3.
- Pose: How will you add a 1-digit number to a 2-digit number?
- Write any 2-digit number on the board; say, 26.
- Recall that number on the right is ones and that on the left is tens; here 6 is at the ones place and 2 at the tens place.
- Invite one student to form the number 26 using the tens and ones cubes.
- Appreciate if he/she uses 2 tens blocks to represent 20 and 6 ones cubes to represent 6.
- Ask the students to add 3 and 26.
- Pose: How will you add 3 to 26? What is the place value of 3; ones or tens? Seek response.
- Conclude using students’ response that 3 ones should be added to 6 ones.
- Invite another student to show the addition using the blocks.
- Guide them to place and add the ones cubes together.
- Count and show that 6 ones and 3 ones put together will be 9 ones.
- Write on the board: 6 ones + 3 ones = 9 ones
- Next, add tens: 2 tens + 0 tens = 2 tens;
- Write on the board in vertical columns: \[ 26 + 3 = 29 \]
- Ask the students to add 45 and 20.
- Reiterate that first they will add ones and then add tens.
- Invite 2 students to represent 45 and 20 using the blocks and add them.
- Guide them to add ones: 5 ones + 0 ones = 5 ones.
- Add tens: 4 tens + 2 tens = 6 tens
• Write on the board in vertical columns: \( 45 + 20 = 65 \)
• Extend the activity by inviting few more students to form and add tens to 2-digit numbers, if time permits.
• Write questions on the board: Add: \( 33 + 5, 82 + 6, 51 + 20 \) and \( 14 + 30 \).
• Encourage the students to write them in vertical columns and add.
• Reiterate: first add ones and then add tens.
• Instruct them to work individually without discussing with their partners.
• Move around in the class to help and guide them whenever required.
• Ask them to exchange their notebooks with their partners.
• Discuss the answers and ask them to verify; here, 38, 88, 71 and 44.
• Practice with more numbers till time permits.

While adding two tens together, add both the digits at the tens place and place a zero at the ones place; to add \( 50 + 30 = 80 \) (Think \( 5 + 3 = 8 \))

• Add the following:
  » \( 12 + 6, 53 + 4, 37 + 2 \) and \( 93 + 5 \) (Ans: \( 18, 57, 39 \) and \( 98 \))
• Write in vertical columns and add:
  » \( 27 + 20, 51 + 40, 43 + 10 \) and \( 39 + 50 \) (Ans: \( 47, 91, 53 \) and \( 89 \))

• Choose the correct answer: \( 25 + 4 \) is 65 or 29? (29)
• How many tens will you get if 3 tens are added to 4 tens? (7 tens or 70)

• Find the total runs made by Sachin if he scored 20 run more after his half century? (Hint: Half century is 50)
• How many days will be 10 more than the days in the month of March?

• Make your child note the last two digits of the number plate of a vehicle. Ask him/her to add 2 tens to it. (Please check that the number at the tens place is 7 or less than 7)
• Let your child note down his/her date of birth. Ask him/her to count and write the number of his/her fingers and add to the number.

Content Book Reference: Page 117, 118
Guided Practice: Page 90-92
Lesson Plan - 2

Grade - 1

Learning Objective
- To subtract ones from a given 2-digit number, without borrowing.
- To subtract tens from a given 2-digit number.

Material Required
Beads, string

Activity
- Ask the students to recall what is meant by subtraction.
- Reinforce: subtraction is taking away of objects from the total number of the objects.
- Check students’ understanding by asking questions such as:
  $8 - 5 = \_\_\_, 7 - 4 = \_\_\_, 6 - 0 = \_\_\_?$
- Appreciate if the students give correct answers; here, 4, 3 and 6.
- Pose: How will you subtract a 1-digit number from a given 2-digit number? Seek response.
- Provide and place beads and strings of suitable length on the table.
- Write any 2-digit number on the board; say, 27.
- Invite two students to form the number 27 using the beads.
- Recall that 27 can be written as 2 tens and 7 ones.
- Guide them to form two strings with 10 beads each to represent 2 tens and 7 beads left alone which shows 7 ones.
- Tell them to subtract 4 from 27, using the beads.
- Reinforce that the place value of 4 is ones; so subtract 4 ones from 7 ones.
- Guide them to remove 4 beads from 7 beads; here, 3 beads are left.
- Write on the board: 7 ones – 4 ones = 3 ones
- Next, subtract tens: 2 tens – 0 tens = 2 tens
- Write on the board in vertical columns: $27 - 4 = 23$
- Ask the students to subtract 20 from 34.
- Reinforce that similar to addition, in subtraction also we first subtract the ones and then subtract the tens.
- Invite 2 students to represent 34 using the beads as done earlier.
- Appreciate if they form 3 strings of 10 beads each and 4 beads left alone.
- Elucidate subtraction of 20 from 34 using the beads.
  » Subtract ones; 4 ones – 0 ones = 4 ones.
  » Subtract tens: remove 2 strings of beads from 3 strings to subtract tens;
  » 3 tens – 2 tens = 1 tens
- Write on the board in vertical columns: $34 - 20 = 14$
• Extend the activity by inviting few more students to form 2-digit numbers and subtract tens from it, if time permits.
• Encourage the students to write them in vertical columns and subtract.
• Instruct them to work individually without discussing with their partners.
• Move around in the class to help and guide them whenever required.
• Ask them to exchange their notebooks with their partners.
• Discuss the answers and ask them to verify; here, 11, 32, 16 and 21.
• Practice with more numbers till time permits.

To subtract tens from tens, think of subtracting digits at the tens place and placing a zero at the ones place.
70 – 50 = 20 (Think 7 – 5 = 2)

• Subtract the following:
  » 16 – 5, 68 – 6, 55 – 3 and 34 – 2 (Ans: 11, 62, 52 and 32)
• Write in vertical columns and subtract:
  » 57 – 20, 48 – 30, 32 – 10 and 75 – 40 (Ans: 37, 18, 22 and 35)

• What is the value of 90 – 60? (30)
• Choose the correct answer: 47 – 3 is 44 or 17? (44)

• Find the number obtained when 30 is subtracted from the sum of 58 and 20.
• Find the difference between the greatest 2-digit number and the smallest 2-digit number.

• Provide a necklace of beads to your child. Let your child count and note down the number of beads. Ask him to find the number of beads that would be left if 20 beads are removed from it. (You may use buttons too for this activity)
• Make your child roll a dice twice to form a 2-digit number. Ask him/her to subtract 10 from it.
Lesson Plan - 3

Grade - 1

Learning Objective
To add two or more 2-digit numbers without regrouping.

Material Required
Straws, rubber bands

Class, Individual Activity

Activity

- Make groups of four students each.
- Distribute straws and rubber bands to each group.
- Write two 2-digit numbers on the board such that their sum does not involve carryover, say, 25 and 13.
- Ask the students in each group to find the sum of 25 and 13 using the straws.
- Give them instructions such as:
  - Two students in a group will form one number, say, 25 using the straws.
  - Another two students will form the other number; here 13.
- Recall quickly; to represent one tens, make groups of 10 straws and tie them with a rubber band.
- Demonstrate it in the class, if required.
- Recall addition of ones and tens as done in the previous lessons.
- Reinforce that ones are added together and the tens are added together.
- Encourage the students to put the straws that represent ones together and add them; here 5 ones + 3 ones = 8 ones
- Next add the tens; here, 2 tens + 1 tens = 3 tens.
- Ask the students to say aloud the sum obtained.
- Instruct all the students to verify their answer.
- Encourage them to write the numbers in vertical columns and add.
- Write it on the board and show that 25 + 13 = 38
- Extend the activity where students add three two-digit numbers without carryover using the straws; say add 12, 15, and 10.
- Appreciate if they calculate 12 + 15 + 10 = 37
- Write questions on the board such as: Add: 32 + 56, 44 + 25, 51 + 20 + 25 and 22 + 31 + 4.
- Encourage the students to write them in vertical columns and add.
- Instruct them to work individually without discussing with their partners.
- Move around in the class to help and guide them whenever required.
- Ask them to exchange their notebooks with their partners.
- Discuss the answers and ask them to verify; here, 88, 69, 96 and 57.
- Practice with more numbers till time permits.
Analysis

• 23 boys and 14 girls will be equal to how many students in all? (37)
• What is 24 + 31 + 4 equal to? Is it 95 or 59? (59)

Thinking Skills

• Find the total number of fruits if 2 dozen mangoes and 1 dozen pears are put together in a bag. (Hint: 1 dozen = 12)
• Reeta is 25 years elder to her daughter Seema. Seema is 14 years old. What is the age of Reeta?

Parents' Connect

• Make your child note two 2-digit house numbers. Encourage him/her to add and find their sum.
• Let your child note any two of his favourite dates from a calendar and encourage him/her to find their sum.
• Note: Parents take care that these numbers do not involve carryover.
Learning Objective: To subtract a 2-digit number from a given 2-digit number, without regrouping.

Material Required: Buttons, bangles

Activity:
- Place the buttons and bangles on the table.
- Write a 2-digit number on the board, say 38.
- Invite one student to represent the number 38 using the buttons.
- Reinforce that 1 tens = 10 ones.
- Guide them to place 10 buttons together in one bangle to represent 1 tens.
- Appreciate if the student makes 3 of such groups in 3 bangles to represent 3 tens and place 8 buttons separately for 8 ones.
- Write another 2-digit number on the board, say 25.
- Ask to students: How will you find the difference of both the numbers? Which number is written on top while subtracting two numbers?
- Seek response.
- Reiterate using students’ response:
  » We first subtract the ones and then subtract the tens.
  » The smaller number is subtracted from the greater number; here, 38 – 25.
- Recall subtraction of ones and tens done in the previous lessons.
- Invite another student to show subtraction of numbers using the buttons.
- Encourage the students to subtract ones; remove 5 buttons from 8 buttons; here 3 buttons are left.
- Subtract tens; remove 2 bangles with 10 buttons each from 3 bangles; 1 bangle with 10 buttons is left.
- Ask them to say aloud the number formed by the buttons left; here, 1 bangle with 10 buttons represents 1 tens and 3 single buttons means 3 ones are left, so the number formed is 13.
- Elucidate each step on the board as:
  » Subtract ones: 8 ones – 5 ones = 3 ones.
  » Subtract tens: 3 tens – 2 tens = 1 tens
- Write on the board in vertical columns: 38 – 25 = 13
- Make pairs of students sitting next to each other.
- Write few questions on the board such as: Subtract: 44 – 31, 27 – 13, 55 – 32 and 68 – 48.
• Place the tens below tens and ones below ones in proper vertical column while subtracting one number from another.

• Always subtract smaller number from the bigger number.

• Subtract the following:
  » 26 – 15, 68 – 46, 95 – 23 and 49 – 12 (Ans: 11, 22, 72 and 37)

• Find the difference of:
  » 55 and 24, 87 and 63, 48 and 23 and 78 and 35 (Ans: 31, 24, 25 and 43)

• What is the difference of 67 and 24? (43)

• How will you verify your answer if 54 – 23 = 31? (Add 23 + 31 = 54; add the difference to the smaller number to get the bigger number)

• What more should be added to 25 to make it 38?

• Akash subtracted a number from 75, but his answer was still 75. Which number did Akash subtract from 75?

• Help your child find the difference in the age of any two family members.

• Call out any 4 digits to your child. Let your child form the greatest and the smallest 2-digit numbers from digits. Encourage him/her to find the difference between the two.

Parents' Connect

Help your child find the difference in the age of any two family members.

Call out any 4 digits to your child. Let your child form the greatest and the smallest 2-digit numbers from digits. Encourage him/her to find the difference between the two.
Lesson Plan - 5

Grade - 1

Learning Objective
To add two numbers within 100, with regrouping.

Material Required
Tens and ones blocks, dice

Group, Individual Activity

Activity

- Write on the board: Add: 24 + 17.
- Invite 2 students to form 24 and 17 using the blocks and add.
- Recall addition of tens to a 2-digit number
- Appreciate if they place 4 ones and 7 ones cubes together and 2 tens block and 1 tens block together to add.
- Bring their attention to the ones cubes; here 4 + 7 = 11 ones cubes.
- Pose: How will you write 11 in the column of ones? Seek response.
- Share with the students that when the sum of the ones digits is 10 or more than 10, then we regroup ones into tens and ones.
- Recall that 10 ones = 1 tens.
- Show that we replace 10 ones cubes with 1 tens block and place it with the existing tens blocks.
- Encourage them to add all the tens and say aloud the number formed; here 41.
- Elucidate each step on the board:
  » Add ones: 4 ones + 7 ones = 11 ones.
  » Regroup ones: 11 ones = 10 ones + 1 ones = 1 tens + 1 ones
  » Add tens: 2 tens + 1 tens + 1 tens (carryover) = 4 tens.
- Write on the board in vertical columns: 24 + 17 = 41
- Make groups of four students each.
- Distribute one dice to each group.
- Give instructions to the students as:
  » Each student in a group to roll out dice only once, obtain four digits in each group, say, 5, 3, 1 and 6.
  » Form two 2-digit numbers using these four digits obtained; say 52 and 16.
  » Find the sum of the numbers.
- Clarify doubts, if any.
- Write few questions on the board such as: Add: 34 + 28, 46 + 25, 17 + 37 and 86 + 9
- Encourage the students to write them in vertical columns and add.
Ten units of ones make 1 unit of tens. Adding one to a higher place value means adding 10 units of a smaller place value.

- Add the following:
  - 42 + 28, 36 + 15, 37 + 56 and 23 + 69 (Ans: 70, 51, 93 and 92)

- Find the sum in each of the following:
  - 42 + 14 + 25, 15 + 33 + 28 and 13 + 18 + 20 (Ans: 81, 76 and 51)

- How much is 24 more than 36? (60)
- What is the sum of 17 + 26 + 32? (75)

- What more should be added to 25 to make it 38?
- Vikash subtracted a number from 45, but his answer was still 45. Which number did Vikash subtract from 45?

- Make your child note the last four numbers of a number plate of any vehicle. Help him/her to form two 2-digit numbers from it and find the sum.
- Ask your child to roll a dice 4 times and form two 2-digit numbers from the digits obtained. Encourage him/her to find the sum of the numbers formed.
Learning Objective: To subtract two numbers within 100, with regrouping.

Material Required: Toothpicks, rubber band

Stress Words: Regroup

Activity

- Make pairs of students sitting next to each other.
- Distribute few toothpicks and rubber bands to each pair.
- Ask them to subtract 15 from 34 as done earlier in subtraction of 2-digit numbers without regrouping using the toothpicks.
- Appreciate if the students form 3 bundles of ten toothpicks each to represent 3 tens and 4 toothpicks for 4 ones.
- Guide and show them how to make bundles of toothpicks with the help of a rubber band, if required.
- Reiterate that first ones are subtracted and then tens.
- Bring students’ attention to the digits at the ones place; here 4 and 5.
- Make them observe that 5 > 4.
- Pose: How can a bigger number be subtracted from a smaller number?
- Seek response.
- Share with them that in such cases, we regroup or borrow from the next higher place value.
- Help them recall that 10 ones = 1 tens.
- Ask the students in each pair to borrow 1 tens from 3 tens.
- Open the rubber band of 1 tens bundle of the toothpicks and place them with 4 toothpicks placed earlier.
- Demonstrate it in the class.
- Ask the students to count and say aloud the total number of toothpicks in the ones place, here 14 in all.
- Encourage them to now subtract 5 ones from 14 ones; here remove 5 toothpicks from 14 toothpicks.
- Write on the board: 14 ones – 5 ones = 9 tens
- Next, subtract tens.
- Remind them that they had borrowed 1 tens earlier so 2 tens are left.
- Appreciate if they remove 1 bundle of toothpicks from 2 bundles of toothpicks to subtract tens.
- Show that: 2 tens – 1 tens = 1 tens.
Understanding

Borrowing 1 from the higher place value means borrowing 10 units of the smaller place value.

Expected

What is 30 – 14? Is it 24 or 16? (16)

What is one less than 90? (89)

Analysis

Application

Subtract the following:
» 26 – 18, 32 – 9, 54 – 39 and 40 – 12 (Ans: 8, 23, 15 and 28)

Find the difference of:
» 45 and 27, 80 and 63, 48 and 29, 72 and 37 (Ans: 18, 17, 19 and 35)

Thinking Skills

What is 30 – 14? Is it 24 or 16? (16)

What is one less than 90? (89)

How many runs should Virat add to 25 to make a half century? (Hint: half century = 50)

If Ajay was absent for 11 days in the month of September due to fever, how many days did he attend the school?

Parents' Connect

Make your child roll a dice four times and note the numbers obtained. Ask him/her to form two 2-digit numbers from them and find their difference.

Let your child open any page of his/her book and note down its 2-digit page number. Repeat it again to get another 1-digit or 2-digit number. Encourage him/her to find the difference in the numbers obtained.

Content Book Reference: Page 127, 128

Guided Practice: Page 101

Parents' Connect

Make your child roll a dice four times and note the numbers obtained. Ask him/her to form two 2-digit numbers from them and find their difference.

Let your child open any page of his/her book and note down its 2-digit page number. Repeat it again to get another 1-digit or 2-digit number. Encourage him/her to find the difference in the numbers obtained.

Content Book Reference: Page 127, 128

Guided Practice: Page 101
Learning Objective
To solve simple word problems based on addition and subtraction of numbers within 100.

Activity

- Narrate few situations to the students:
  » Seema has 24 toffees and her sister Sunita has 28 toffees. How many toffees do they have in all?
  » There are 35 students in class III, out of which, 18 are boys. How many girls are there in the class?
- Discuss with the students on how to solve such daily life situations.
- Seek responses.
- Conclude using students’ response that:
  » To calculate the total number of objects, they must add the numbers.
  » To find out what is left from a given total when some are taken away, they must subtract the smaller number from the greater number.
- Explain that in the first situation, they must add the number of toffees that Seema and Sunita had to get the total number of toffees.
- Encourage the students to write the numbers in vertical columns and solve individually without discussing with their partners.
- Remind them to regroup ones into tens and ones.
- Discuss the answers and ask them to verify their answers.
- Show on the board in vertical columns: 24 + 28 = 52
- Write the statement on the board as:
  The total number of toffees is 52.
- Encourage the students to find the number of girls in the second situation.
- Appreciate if they mention that they will subtract the number of boys, here 18, from the total number of students, here 35.
- Reiterate that they should borrow 1 tens if the number to be subtracted is more than the number from which it is subtracted; here 5 < 8.
- Discuss the answers and ask them to verify their answers.
- Show on the board in vertical columns: 35 – 18 = 17
- Write the statement on the board as:
  The number of girls is 17
- Clarify doubts, if any.
- Write few word problems on the board as:
  » Rekha made 18 red paper flowers and Arushi made 24 yellow paper flowers. How many flowers did they both made in all?
» Ginnie bought 50 toffees to the school to distribute in the class on her birthday. She distributed 44 toffees. How many toffees are left with her?

- Ask the students to solve the word problems individually without discussing with their partners.
- Move around in the class to guide them, if required.
- Instruct the students to exchange their notebooks with their partners and verify the answers; here, they made 42 paper flowers in all and 6 toffees are left with Ginnie.
- Provide them with more word problems as time permits.

Solve the following word problems:

» There were 85 people travelling in a bus. 58 got off the bus at the Railway Station. How many were left in the bus? (27 people are left in the bus)

» Rahul sold 16 vanilla ice creams and 28 chocolate ice creams. How many ice creams did he sell altogether? (He sold 44 ice creams in all)

- If out of 15 mangoes, 6 are rotten, how many mangoes are not rotten? (9)
- A fruit basket contains 11 mangoes, 24 bananas and 15 apples. How many fruits does the basket contain all together? (50)

- Three friends bought 20 blue pens, 13 red pens and 18 black pens from a shop. In all, 15 pens were not working. How many pens were working?
- In a puppet show, 34 tickets were sold on Thursday and 28 tickets were sold on Friday. Saturday being a holiday, the tickets sold were 27 more than the tickets sold on Thursday and Friday. How many tickets were sold on Saturday?

Present word stories to your child like:

» On your birthday party, there were 25 blue balloons and 33 white balloons. How many balloons were there in all?
» Your grandfather’s age is 74 and your father’s age is 57. How many years elder is your grandfather to your father?
Lesson Plan - 1
Grade - 1
MULTIPLICATION

Learning Objective
- To understand and multiply numbers through repeated addition.
- To identify patterns in shapes.

Material Required
Pebbles/Rajma beans

Stress Words
Repeated addition

Activity
- Call 2 students to come up in front of the classroom and stand together.
- Call 4 more students, 2 at a time and ask each pair to stand together and slightly away from the other pairs.
- Ask the class to count and tell you the total number of students standing in front of the room.
- Ask how many students are in each group and how many groups are there. (2 students in each group, 3 groups)
- Seek responses and explain on the board $2 + 2 + 2 = 6$.
- Repeat the activity by calling out 9 students, three at a time and then 12 students 4 at a time.
- Each time make sure the students stand in the groups specified (3, 4) and the class counts the total and tells you the number of students per group and the total number of groups.
- Each time write the answer on the board: $3 + 3 + 3 = 9$ and $4 + 4 + 4 = 12$ and then tell students we say there are 3 groups of 3 i.e. 3 threes and 3 groups of 4 i.e. 3 fours respectively.
- Repeat such an activity with different numbers of groups so students gain a clear understanding of repeatedly adding and in groups.
- Each time write on the board and invite the students to say aloud the number of groups and the number per group.
- Divide the class into groups.
- Give 4 pebbles to each group, then 4 more and so on ... till each group has 20 pebbles.
- Through questions and discussion, write on the board: $4 + 4 + 4 + 4 + 4 = 20$ and tell the students there are 5 groups of 4 pebbles which means 5 fours or 5 sets of 4 pebbles.
- Point to what you have written on the board and through questions; explain how we are adding again and again i.e. repeating the addition of the same number and as many times as there are groups or sets.
• Each time ask students to count and tell you the group number and the total. Tell them to note it down in their books each time.
• Through discussion, conclude the concept of adding the numbers repeatedly and as many times as there are groups. Emphasise the point about repeating the addition.

• Adding the same number again and again is called repeated addition. When each group has the same number, we repeatedly add numbers in each group to find how many are there in all.

• A car has 4 wheels. 3 cars are parked at a parking lot. How many wheels are there in all? \(4 + 4 + 4 = 12\) wheels
• You go to school 5 days in a week. How many days do you go to school in 4 weeks? \(5 + 5 + 5 + 5 = 20\) days

• Draw on the board as shown.
  
  ![Illustration](image)

  • How many groups are there? (5 groups)
  • How many circles are there in each group? (4 circles in each group)

  • Write the number on the board as \(2 + 2 + 2 + 2 + 2 = 10\) and find out how many groups are there.

• What is 8 times 9? (72)
• I am 6 years old. My mother is 5 times as old as I am. How old is my mother? (30 years)

• Help your child perform the following activity. Take out books from his/her bag. Ask him/her to put 2 books in one pile and puts 2 books in another pile.
• Ask how many groups are there and how many books in each group.
• Let them place rajma beans in groups of 3 and find how many rajma beans are needed for 3 groups, 4 groups, and so on.

Content Book Reference: Page 135-137
Guided Practice: Page 107-109
**Learning Objective**

To use symbol of multiplication and write multiplication facts.

**Stress Words**

Multiplication, Multiplication sentence

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**Activity**

- Divide the class into 4 groups.
- Draw 15 lines on the board in groups of 3.

```
  1  2  3  4  5
```
- Now ask questions from each group one by one.
- Ask: How many groups of lines are there? (5 groups)
- Ask: How many lines in each group? (3 lines)
- Ask: how many total numbers of lines are there? (15 lines)
- Tell them by adding repeatedly, we can find this out i.e. $3 + 3 + 3 + 3 + 3 = 15$ lines which means 3 is added 5 times.
- Tell them we can call it as 5 groups of 3 or 5 times 3.
- Explain them 5 times 3 i.e. $5 \times 3 = 15$. ‘×’ is the symbol of times and we call it as multiplication symbol.
- Tell the students instead of writing $3 + 3 + \ldots$ 5 times we write is as $5 \times 3 = 15$ and we read it as 5 times f 3 equal to 15.
- Explain the students, when we repeatedly add groups of same numbers or quantities, we call it multiplication.
- Write on the board a few equations e.g. $6 + 6 + 6 = 18$ and each time ask students to tell you the way it can be written in the form of multiplication sentence
- Seek responses. (3 times 6 which is written as $3 \times 6 = 18$).
- Explain another example as, if there are 3 benches in the park and in each bench 3 children can sit then, how many children can sit in all 3 benches?
- Explain on the board: $3 + 3 + 3$ which means $3 \times 3 = 9$.
- Repeat this activity 5 – 6 times using different numbers.
- Do a quick oral quiz and ask question such as how will they write 5 times 4 using multiplication symbol.
- Seek responses $4 + 4 + 4 + 4 + 4 = 5 \times 4 = 20$
- Tell the students, when we repeatedly add groups of same numbers or quantities, we call it multiplication. Also we can say the multiplication is a faster way of repeated addition.
Multiplication is a quicker way of showing a long adding sum of the same number.

- There were 5 tables laid for a party. At each table, 7 people were seated. How many people were there in all? (35 people)
- There are 6 cars each with 5 people going for picnic. How many people in all are going for the picnic? (30 people)
- Raj feeds grains to the hens. There are 10 hens in 1 coop. There are 2 coops in the farm. How many hens are there in all in the farm? (20 hens)
- There are 7 trees in the park. If there are 2 birds sitting on each tree, how many birds are there in all? (14 birds)
- Match the addition fact and multiplication fact to the correct picture by colouring the boxes with the same colour.

<table>
<thead>
<tr>
<th>Addition Fact</th>
<th>Multiplication Fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2 + 2</td>
<td>5 x 2</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2</td>
<td>3 x 2</td>
</tr>
<tr>
<td>2 + 2 + 2</td>
<td>7 x 2</td>
</tr>
<tr>
<td>2 + 2 + 2 + 2 + 2 + 2 + 2 + 2</td>
<td>8 x 2</td>
</tr>
</tbody>
</table>

Mohan has 7 tickets. Pinku has double the number of tickets that Mohan has. How many tickets does Pinku have? (14 tickets)

- Help your child perform the following activity. Arrange 5 bowls in a line and ask the child to put 4 beads in each bowl. Tell the child to express this as repeated addition and multiplication sentence,
- Repeat the same activity using 10 bowls and ask the child to put 2 beads in each bowl.
- Ask the child to write all the repeated addition and multiplication sentence made by the bowls and beads in his/her notebook and conclude.

Content Book Reference: Page 137-139
Guided Practice: Page 107-109
Lesson Plan - 3

Grade - 1

Learning Objective
To understand and multiply numbers through number line.

Material Required
Draw number line on the floor

Stress Words
Multiplication, Times

Class, Group Activity

Activity

• Take the students outside the classroom.
• Draw a number line on the floor or sidewalk and then demonstrate how the line can be marked off in equal intervals, and then assign a volunteer student to fill in the numbers 0-30 on the line.
• Ask the other students to stand in a circle around the number line.
• Call another volunteer student and ask him/her to stand on number 0 on the number line.
• Ask a volunteer student to name any number say 2 or 3 or 4.
• Then, starting at 0, have the volunteer jump a counter down the number line as the rest of the class skip counts by that number (for example: 3, 6, 9, 12, 15, ...).
• Explain the students on the board such as: when you jump first time you reach at 3.
• After 2 jump on the number line you will land on 3 + 3 = 6;
• After 3 jumps on the number line you will land on 3 + 3 + 3 = 9
• After 4 jumps on the number line you will land on 3 + 3 + 3 + 3 = 12 and so on.
• Point to what you have written on the board and through questions, explain how we are adding again and again i.e. repeating the addition of the same number of steps and as many times as the number of jumps.
• Repeat this activity 5 – 6 times with other volunteers using other numbers.
• Take the students inside the classroom and ask them to sit in their places.
• Write the following equation on the board: 5 + 5 + 5 + 5 = 20
• Draw a number line on the board and then, demonstrate with a counter how jump of 5s can be taken on the number line.
• Tell the students, start at 0, jump 5 four times, then stop at 20.
Tell them we jump 4 times in groups of 5s which can be written as \(4 \times 5\).

Tell the students ‘\(\times\)’ is the symbol of times and we call it as multiplication symbol.

You may wish to encourage students to count aloud as the hops/jumps are made.

When 20 is reached, complete the equation \((4 \times 5 = 20)\) and encourage the students to translate it as, "When you take four jumps in groups of 5s, you land on 20."

Write another example on the board such as \(3 + 3 = 6\) and each time ask students to tell you the way it can be drawn on the number line and say aloud with you “we jump 2 times in groups of 3s and land on 6” which can be written as \(2 \times 3 = 6\).

Repeat 2-3 similar questions on the board and seek answers in groups.

Be sure to follow the same pattern every time:

- Number of jumps \(\times\) Number of steps in each jump = Answer

The shortest way of thinking about repeated addition is called multiplication.

The students must understand the number of jumps comes first and then number of steps in each jump. E.g. 4 jumps in groups of 3s means 4 times 3 which can be written as \(4 \times 3 = 12\)

Draw on the number line: 7 jumps in groups of 2s and write the answer where did you land in your notebook.

Draw on the number line: 6 jumps in groups of 5s and write the answer where did you land in your notebook.

Draw a number line on the board and show 5 jumps in groups of 3s.

Ask: Where did you land?” \((5 \times 3 = 15)\) "How will you write it?”

Then ask them to show three jumps in groups of 5s on the other number line.

Ask the students to write the equation for the number line shown on the board in their notebooks and show to you. \((3 \times 5 = 15)\)

On a number line, if you land on the number 30 after 5 jumps, How many steps will you take in each jump? \((6\) steps\)

In how many jump, you will reach at number 20. If you take 2 steps in your each jump? \((10\) jumps\)

Help your child perform the following activity. Draw a number line on the floor and ask your child to jump and count in 2s, 3s, and 4s.
Lesson Plan - 4

Learning Objective
To build and recite the multiplication tables of 1, 2, 3, 4 and 5.

Material Required
Marbles/pebbles and paper plates

Stress Words
Multiplication tables

Activity
- Ask the students do you help your mother in kitchen or in some house hold work?
- It’s a festival time. Your mother asks you to place 4 sweets in 10 plates for the guest. You arrange 4 sweets in plates. How many sweets did you arrange in all? How will you find that?
- Seek responses (Through repeated addition or multiplication)
- Tell the students there is a need of multiplication table. Multiplication tables is a faster way to count the total number of sweets in all 10 plates.
- Divide the class into two groups.
- Give 10 marbles and 10 marbles/pebbles to each group.
- Tell the students in groups to place 1 marble/pebble in one plate.
- Ask the students how many marbles are there in a plate.
- Seek responses. 1 marble 1 plate which means 1 x 1 = 1
- Now ask the students to place one marble in the second plate.
- Ask: How many plate are there?
- Allow the student to give you the answer: There are 2 plates and 1 marble in each plate.
- Explain on the board: It is shown as 1 x 2 = 2
- Repeat the same process by increasing the number of plates 1 by 1 placing 1 marble each time in a plate.
- Explain on the board step by step:
  - 1 means 1 group of 1 i.e. 1 times 1 i.e. 1 x 1 = 1
  - 1 + 1 means 2 groups of 1 i.e. 2 times 1 i.e. 2 x 1 = 2
  - 1 + 1 + 1 means 3 groups of 1 i.e. 3 times 1 i.e. 3 x 1 = 3
  - 1 + 1 + 1 + 1 means 4 groups of 1 so 4 times 1 i.e. 4 x 1 = 4 and so on.
- Tell the students to say the table aloud with you in this way: 1 times 1 is 1; 2 times 1 is 2 and so on. Do this 3-4 times.
- Emphasise the concept of repeated addition.
- Repeat this activity and explain the making of the table 2, 3, 4 and 5 in the same way.
- Ask the students to say aloud all the tables 2 – 3 times with you by looking at their book.
- Tell the students to revise and memorise the tables of 1, 2, 3, 4 and 5 at home.
Help the students find out that when we multiply any number with 1, we get the same number.

Students can build any multiplication tables through repeated addition.

- Kavya reads 3 pages daily. How many pages will she read in 9 days? (27 pages)
- Sohan can buy 5 toffees in one rupee. How many toffees he can buy in 4 rupees? (20 toffees)
- There are 5 vases and each vase has 8 flowers. How many flowers are there in all? (40 flowers)
- 2 children are swinging on each swing. There are 10 swings in the park. How many children are swinging in all? (20 children)
- Jyoti has a big collection of marbles. She place 0 marbles in one bowl. There are 5 such bowls. How many marbles does she place in 5 bowls if one bowl can hold only 10 marbles? (50 marbles)
- There are 2 one-digit numbers. Their sum is 4 and their product is also 4. What are the numbers? (2, 2)
- Help your child perform the following activity. Parents may be helped to memorise multiplication tables by reading aloud repeatedly.
- At the time of dinner at home. Ask your child to place 2 chapatis in each plate and tell them to count how many chapatis are there in all?

Parents’ Connect

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</table>
Learning Objective
- To recognise plane shapes such as square, rectangle, triangle and circle.
- To identify the sides and corners of plane shapes.

Material Required
Scale/ruler, coin/bangle, chalk box, set square, geoboard, rubber bands

Stress Words
Square, rectangle, triangle, circle, side, corner

Activity
- Ask the students to look around in the class and observe objects with various shapes, say, board, chart paper, chalk box, windows, fan, tube light, etc.
- Ask few questions such as: Do you know the shape of the top of the chalk box? What is the shape of the door? Seek response.
- Appreciate if they mention shapes such as a square, rectangle, circle, etc.
- Place all the objects on a table; coin, scale, chalk box and set square.
- Hold the chalk box and show it to the students.
- Make them observe the shape of any one face of the chalk box.
- Share with them that this shape is called a square.
- Draw a square on the board.
- Bring their attention to all the four sides of the square.
- Help them conclude that all the sides of a square are equal.
- Point towards the place where the 2 sides meet.
- Inform them that the point where two lines meet is called a corner.
- Invite one student to identify the corners and say aloud the number of corners a square has; a square has 4 corners.
- Show a scale to the students.
- Share that this shape is called a rectangle.
- Draw a rectangle on the board.
- Encourage them to identify its sides and corners.
- Guide their attention to the opposite sides of the rectangle.
- Establish that the opposite sides of a rectangle are equal.
- Show a set-square to the students.
- Discuss and establish that a 3-sided plane figure formed by straight lines is called a triangle and it has 3 corners.
- Draw a triangle on the board and encourage students to identify its sides and corners.
- Next, show a coin or a bangle to the students.
- Appreciate if they mention its shape as a circle.
- Pose: How many sides and corners does a circle have? Identify them.
- Seek response.
- Establish that a circle is round. It has no side and no corner.
• Divide the class into groups of 4 students each.
• Distribute one geoboard and few rubber bands to each group.
• Encourage the students to make figures of a square, a rectangle and a triangle on the geoboard using rubber bands.
• Demonstrate it in the class.
• Move around in the class to help and guide them.
• Ask them to identify the sides and corners in each figure they make.
• Summarise the characteristics of plane figures done in the class:
  » All the four sides of a square are equal and it has 4 corners.
  » The opposite sides of a rectangle are equal and it has 4 corners.
  » A 3-sided figure formed by straight lines is called a triangle and it has 3 corners.
  » A circle is round.
• Extend the activity where students observe and identify the plane figures in things around them in the class.
  • All the 4 sides of a square are equal.
  • The opposite sides of a rectangle are equal.
  • A circle is round.

Solid figures are formed by combining plane shapes; cube has 6 square faces.

Who am I:
  » I look like the face of a sugar cube
  » I am a shape with no corners
  » The pencil box has my shape.
  » I am a shape with all its four sides equal.
  » I am a shape with three corners.
(Ans: square, circle, rectangle, square, triangle)

Analysis

• What is the shape of the table top? (square /rectangle)
• What is the shape of a wheel? (circle)
• What is the shape of our tricolour? (rectangle)

Thinking Skills

• How many sides does a pentagon and hexagon have? How many corners will they have?
• Is the shape of a ball same as the shape of a coin? Give reasons to support your answer.

Parents' Connect

• Help your child to trace the outline of a scale, flat conical birthday cap, dice and a round plate. Encourage him/her to identify each shape obtained, its sides and corners.
• Encourage your child to note down 5 things of different shapes in and around your house; such as, plates are circular in shape, doors and windows are rectangle in shape, etc.

Content Book Reference: Page 150-153
Guided Practice: Page 121-123
### Learning Objective
- To establish that the original shape can be created by putting back the pieces of the shape.
- To create different shapes by joining two similar shapes in different manners.

### Material Required
- Medium sized triangle and circle cut outs,
- paper sheet, origami sheets (2 colours), glue stick

### Activity
- Pose few questions to the students such as:
  - What is the shape of a chapatti? (circle)
  - If your mother divides it equally between you and your brother/sister, what will each person get? (half of the chapatti/circle)
  - What shape will you get if you both place these two half pieces of the chapatti back together?
- Seek response.
- Show the cut out of a circle and encourage the students to identify its shape.
- Appreciate if they mention circle.
- Fold the circle from the centre to make a crease and cut it along the crease to make 2 semicircles.
- Invite one student and help him/her paste these pieces of the circle with the help of a glue stick on a sheet of paper in the same way they were cut.
- Extend the activity with the cut out of the triangle.
- Make them observe that the same shape can be created by joining the cut pieces of a shape; here, triangle and circle.
- Make pairs of students sitting next to each other.
- Distribute 2 square origami sheets of two colours to each pair, say one red and one green.
- Instruct each student in a pair to fold the square origami sheets diagonally so as to form a triangle.
- Ask them to tear the paper at the fold using a scale.
- Demonstrate it in the class.
- Ask: What shapes have you obtained? (triangles)
- Ask the students in each pair to exchange one triangle with their partner so that each one gets one red and one green triangle.
- Pose: What shapes can you create using the two triangles? Seek response.
- Tell one student to paste the triangles side by side so as to create a bigger triangle and the other student to paste them to form a square in their notebook.
Illustrate and show it in the class.

Conclude that different shapes can be created by joining two similar shapes in different ways; here a big triangle and a square are created using 2 triangles.

Extend the activity where students take two squares of equal size and create a rectangle by joining them.

The original shape can be created by putting back the pieces of the shape. Different shapes can be created by joining two similar shapes in different ways.

Use plane shapes such as circles, triangles, squares and rectangles. Draw objects such as: house, sun and boat.

What is the shape obtained when a circle is cut into half? (semicircle)

Can rectangles be joined together to create a square? (Yes)

Create a rectangle with the help of a square and two triangles. (Hint: square can be cut to make 2 triangles)

Can a square and a rectangle be joined together to form a rectangle? Explain using a suitable drawing.

Provide small cut outs of plane shapes, like circles, triangles, squares and rectangles to your child. Help your child create shapes of a car, train, etc. by using these plane shapes.

Provide Tangram (game that has plastic cut outs of different shapes) to your child. Encourage him/her to create different shapes by joining them.

Content Book Reference: Page 154-155
## Lesson Plan - 3

### Grade - 1

### Activity
- Show the objects in the class; dice, soft drink can, ball, pencil box, etc.
- Invite few students to hold these objects in their hands.
- Ask the students to observe the shape of each of the object.
- Share with them that such objects are known as solids.
- Discuss the various solid shapes with them; dice is a cube, pencil box is a cuboid, ball is a sphere, conical birthday cap is a cone and soft drink can is a cylinder.
- Explain that:
  - The surface of a solid shape is called its face.
  - When we trace their faces, we get shapes.
- Divide the class into groups of 4 students each.
- Distribute one object each of all the shapes to each group; here, dice, can and prism. Ask them to use their own pencil box.
- Tell each student in a group to choose one shape each.
- Instruct them to place the base of the solid shape on a sheet of paper and hold it tight with a hand. Then, draw the outline of the object with a pencil.
- Demonstrate with any one solid shape on the board.
- Help and guide the students, if required.
- Make them observe the shapes obtained on tracing the solid shapes.
- Establish that when we trace a solid shape, we get a flat or plane shape.
- Ask few students to share the shapes obtained when they trace a dice, pencil box, prism and the base of the soft drink can.
- Appreciate if they mention square, rectangle, triangle and circle respectively.
- Clear doubts, if any.
- Extend the activity where students can trace the bottle cap, eraser, ruler, etc.
- Encourage the students to observe objects around them in the class and identify them as cube, cuboid, sphere, cylinder or cone.

### Learning Objective
- To identify solid shapes such as cube, cuboid, sphere, cone and cylinder.
- To explore that a plane shape is obtained when we trace solid shapes.

### Material Required
- Dice, empty soft drink can or a cell, prism, pencil box, ball, conical birthday cap

### Stress Words
- Square, rectangle, triangle, circle

### Group Activity
• The surface of a solid shape is called its face.
• Plane shapes are obtained when faces of solid shapes are traced.

Identify the faces, edges and vertices of solid shapes.

• Identify and write the name of the solid shape in each case:
  » Sugar cube, globe, duster, ice cream cone, chalk, football, drum, joker’s cap.
  (Ans: cube, sphere, cuboid, cone, cylinder, sphere, cylinder and cone)

• What is the shape of the face of a dice? (square)
• Do all the faces of the dice have the same shape? (yes)
• Is the shape of your book a rectangle or a cuboid? (cuboid)

• What is the shape of the sun, circle or sphere?
• How many squares should be joined to form a cube?

• Make your child observe objects around him/her in and around the house and encourage him/her identify solid shapes and classify them as cube, cuboid, cylinder, sphere and cone.
• Encourage and help your child to make a wind chime using only geometrical solid shapes. Tell him/her to use waste materials available at home like used cans, toothpaste box, bangles, etc.
Lesson Plan - 4

Grade - 1

Learning Objective
- To observe and identify patterns made with shapes and insert the next shape to complete the pattern.
- To create a pattern with the given shapes.

Material Required
Connecting cubes (three colours)

Activity
- Invite four boys and four girls to volunteer for the activity.
- Make them all stand in a straight line as, one girl, one boy, one girl, one boy, and so on.
- Ask all the students to observe the arrangement of boys and girls in the line.
- Invite few more boys and girls and ask them to join the line.
- Appreciate if they are able to join and continue to follow the arrangement.
- Pose questions such as: What arrangement do you observe in the line of students? Can you add 10 more boys and girls in the same manner?
- Seek response
- Conclude using student’s response that there is repetition of the arrangement; here one boy, one girl, next one boy and so on.
- Establish that a series of figures/objects that are arranged in some order or repeat themselves based on some rule, forms a pattern.
- Bring their attention to the arrangement of tables and chairs in their classroom; one row then space for walking, another row and then space and so on.
- Encourage them to identify patterns around them in the class.
- Appreciate if they mention design on the notice board, classroom flooring, grills of the windows, etc.
- Make pairs of students sitting next to each other.
- Draw few patterns on the board.
- Ask students in each pair to observe the patterns and find the shape that will come next in the patterns.
- Reiterate that they must first identify the shapes/figures that repeat itself in each case.
- Randomly ask few students to draw the figure on the board.
- Ask all the students to verify their answers; here, ○○ △ □ ○ ★ ★
- Clarify doubts, if any.
A pattern is formed when a series of figures or numbers are arranged in some order or they repeat themselves based on some rule.

Patterns formed in numbers and by rotation of shapes.

- Complete the pattern:
  - 😊 😒 😊 😒  
  - ◼ ◼ ◼ ◼  
  - ↑ → ↓ ← ↑  
  (Ans: 😊 , ◼ , →)

- Form patterns with the following shapes:
  - △ △ △  
  - △ □  

- What shape will come next in the pattern?
  - △ ○ △ ○ △ ○ △ (Ans: ○)

- What should come next in the number series to form a pattern?
  - 2, 4, 6, 8, 10, ---  (Ans: 12)

- What will be next number in the series: 3, 6, 9, 15, ____?

- Our planet Earth also follows a pattern. Justify the statement. (Hint: day/night and seasons)

- Make your child observe patterns in the shapes, colours and designs of tiles, bed sheets, sarees, etc. Encourage him/her to analyse and extend the pattern.
- Provide coloured buttons, ribbons or any other decorative materials to your child and help and guide him/her to frame a pattern with the given material.
### Learning Objective
- To measure the length and height of bigger objects using smaller objects.
- To recognise various body parts that are used to measure the length of an object.
- To compare the lengths and heights of objects and identify the longest and the tallest object.

### Material Required
- Eraser, sharpener, crayon, connecting cubes

### Activity
- Recall student’s understanding of length by the following activity.
- Collect two pencils from the students.
- Hold them together so that one end of both the pencils is side by side.
- Make all the students observe the length of both the pencils.
- Ask them to point towards the pencil that is long. Appreciate them.
- Ask: How can you measure the length of objects?
- Accept all answers.
- Share with them that in olden days people used their body parts such as hand span, cubit, foot span, digit, etc. to get an idea of the length of objects.
- Elucidate each of the above mentioned body part to the students.
- Demonstrate the use of a hand span by measuring the length of the board.
- Make pairs of students sitting next to each other.
- Instruct some pairs of students to use their eraser, few other pairs to use a sharpener, and the rest to use a crayon to measure the length of their desks.
- Demonstrate and show how a smaller object can be used to measure the length of bigger objects.
- Move around in the class to help and guide the students.
- Ask the students to share their observation; say length of the desk is 15 erasers, 12 crayons, etc.
- Pose: Why the length of the same desk is different in each case? What could be done so that all get the same length of the desk? Seek response.
- Discuss that it is because we all used non-standard units to measure the length; if a standard unit is used, the length of the desk in each case will be the same.
- Distribute one connecting cube to each pair of students.
- Ask them to measure the length of the desk, math’s book and a chart paper on the display board using the connecting cube.
• Write on the board:
  » Length of the desk = ___ cubes.
  » Length of the math’s book = ___ cubes.
  » Length of the chart paper = ___ cubes.
• Tell them to note down the length of each of the items.
• Ask few students to share their answers.
• Point out to the fact that the length of the desk, math’s book and the chart paper is almost the same in each case as everyone used only one same unit to measure the length.
• Encourage the students to study their answers and identify the object whose length is more than the other two objects.
• Compare the lengths of the objects measured and introduce the terms longest, shortest, taller than and shorter than; say, here,
  » Chart paper is longest and math’s book is shortest.
  » Desk is shorter than the chart paper but longer than the math’s book.
• Extend the activity where students measure the height of their partner with the cube.
• Ask them to compare the heights of 4 of the students sitting next to them to identify who is tallest and who is shortest.
• Encourage them to arrange the heights in increasing order.
• Ask the students to look around in their class and compare the length and height of objects, say, door and window, board and chart paper, etc.

  • Height is measured from the ground to the end; something that is in vertical position.
  • Length measures the distance between two end points those are in horizontal position.

Understanding
Expected

Associated Concepts

Application

Introduction to the standard units of measuring lengths; here, metre, cm and km.

• Measure the length of a table, math’s book and water bottle with a paper clip and record your observations as:
  » Table is ___ clips long.
  » Book is ___ clips long.
  » Water bottle is ___ clips long.
• Answer the following questions based on the above observation:
  » Which object is longest?
  » Which object is shortest?
• Arrange the above objects in the decreasing order of their length.
Analysis

- Whose measure is more: cubit or hand span? (cubit)
- Do you measure the length of a pencil or its height? (length)

Thinking Skills

- What was the need for standard units of measurement?
- Arrange the following in the increasing order of their heights: 3 storey building, mango tree, 8 year old boy and a door.

Parents’ Connect

- Make your child measure the length of a duppata or a towel with his/her hand span and determine which is longer than the other.
- Help your child measure the height of the family members with object like straw, pencil, etc. and arrange the family members in the increasing order of their height.
<table>
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<th>Learning Objective</th>
<th>Material Required</th>
<th>Stress Words</th>
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<tr>
<td>• To identify heavy and light objects.</td>
<td>Weighing balance, inflated balloon, brick, ball</td>
<td>Heavier, heaviest, lighter, lightest</td>
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<tr>
<td>• To compare the weight of more than two objects.</td>
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### Activity

- Invite few students to hold a school bag in one hand and a pencil box in the other hand.
- Ask them to share their experience and tell the class which item is heavy and which is light; here school bag is heavy and the pencil box is light.
- Ask the students: Have you accompanied your elders to buy fruits or vegetables? How does the shopkeeper measure the amount of fruits you buy? What does the shopkeeper measure?
- Seek responses.
- Place a weighing balance on the table.
- Inform the students that a weighing balance is used to measure the weight of an object; there are many varieties of weighing scale.
- Probe: In a weighing balance, which side will move up; lighter or heavier? Seek answers.
- Invite one student to hold the ball and the inflated balloon; experience their weight and say aloud which is heavy.
- Put the inflated balloon on one side and the ball on the other side of the balance.
- Make the students observe the side that goes up; here, side with balloon goes up and the side with the ball goes down.
- Repeat the activity with other objects like pencil box on one side and 5 copies on the other side.
- Encourage the students to note the side that goes up - heavy or light.
- Conclude that the lighter side goes up and the heavier side goes down in a weighing balance.
- Invite one student to determine which object is heavy: brick or ball with the help of the weighing balance.
- Encourage the students to compare the weight of the three objects; the inflated balloon, the brick and the ball.
- Write on the board:
  - Inflated balloon is light and the ball is heavy.
  - Ball is light and the brick is heavy.
• Help them compare the weight of the balloon, ball and the brick and introduce the terms heaviest, lightest, heavier than and lighter than; say, here,

• Write on the board:
  » Brick is the heaviest and the balloon is the lightest.
  » Ball is heavier than the inflated balloon but is lighter than the brick.

• Elucidate that although the size of the ball is small compared to the inflated balloon, it is heavier than the balloon.

• Conclude that the weight of the object depends on the material with which it is made of.

• Extend the activity where students measure the weight of other available objects in the class and identify the heavy and light object.

The weight of an object does not depend on its size; however, it depends on the material it is made of.

Introduction to the standard units of measuring weight; here, kg and g.

• Encircle the object that is heavy in each of the given pair of items:
  » An empty cup and a filled water bottle.
  » 5 apples and 2 pencils.
  » School bag (with books and copies) and 5 biscuits.
  » One chair and one table.
  (Ans: empty cup, 2 pencils, 5 biscuits and one chair)

• If both the sides of the weighing balance are at the same position/level, what does it tell you about the weight of both the objects? (the objects on both the sides have equal weight)

• Which is heavier: a wooden piece or a cardboard of the same size? (Wooden piece)

Will a big object always have more weight compared to a small object? Give reasons for your answer.

• Take your child with you next time you go for shopping. Show him/her the standard weights the shopkeeper uses to measure the weight of the items purchased.

• Help your child hold various items and compare their weights; say, school bag, grocery bag, rice bag, etc. Encourage him/her to arrange them in the increasing order of their weight.
Lesson Plan - 3

Grade - 1

Learning Objective
- To define the quantity of a container.
- To compare and identify the container with more or less capacity.

Stress Words
Small tetra pack of juice, water bottle, cold drink can, 2 empty jugs of the same capacity but of different shapes, cup

Stress Words
Multiplication, Multiplication sentence

Class Activity

Activity
- Place the juice pack, water bottle and cold drink can on the table.
- Invite few students to observe the ‘Net Quantity’ mentioned in each of the container.
- Ask them: What do these containers have in them? What do you understand by the ‘Net Quantity’ of a container?
- Seek response.
- Conclude that all the above containers have liquid filled in them.
- Introduce the term ‘capacity’ to the students.
- Share with them that the quantity of liquid that a container can hold is called its capacity.
- Pose: Which container, according to you, has more capacity: juice pack, bottle or cold drink can? Seek response.
- Place a water bottle and a jug on the table.
- Invite one student to fill the jug with water with the help of the cup.
- Ask all the students to note the number of cups required to fill the jug completely.
- Write on the board: The capacity of the jug is ___ cups.
- Invite another student and ask him/her to fill the water bottle in the same way.
- Again, ask all the students to note the number of cups required to fill the water bottle completely
- Write on the board: The capacity of the water bottle is ___ cups.
- Make them observe the capacity of both the containers by the number of cups required to fill them.
- Help them compare the capacity of the jug and the water bottle and conclude which one has more capacity.
- Write on the board: ___ has more capacity than ___. (jug/water bottle)
- Place two jugs; of different shapes but same capacity, on the table.
- Invite two students and ask them to fill both the jugs separately using the same cup.
- Ask all the students to note the number of cups required to fill both the jugs.
Capacity of a container is the quantity of liquid that it can hold.

Introduction to the standard units of measuring capacity; here, L and mL.

- Encircle the container with more capacity in each of the given pair of items:
  » A cup and a water bottle.
  » Bucket and a jug.
  » Jug and water bottle
  (Ans: water bottle, bucket and jug)
  » Which container has the largest capacity? (bucket)
  » Which container has the least capacity? (cup)

- Note down the capacity of: milk pouch, water bottle, juice pack and a cold drink can.

- Which container has more capacity—a bucket or a jug? (bucket)
- Reena’s glass is tall but narrow and Sheetal’s glass is broad but short. Both their glasses hold one pack of juice? Whose capacity is more? (both the glasses have the same capacity)

- Will the quantity of the liquid change if it is poured into different containers?
- What is the difference between weight of an object and capacity?

- Help your child identify the capacity of various containers at home and determine which one has more capacity.
- Provide few containers like cold drink bottle, water bottle, juice can, milk pouch, etc. to your child and let him/her observe their capacity and arrange them according to the decreasing capacity.
Lesson Plan - 1

Grade - 1

CHAPTER

TIME

Lesson Plan - 1

Learning Objective
- To observe and study the different hands of a clock.
- To be able to read, write and draw the time, O’clock in a clock.

Material Required
Clock, paper plates, drawing pins, straws, scissors

Stress Words
Minute hand, hour hand, O’ clock

Activity
- Ask questions about the daily routine of the students such as:
  - What part of the day do you go to the school? (morning)
  - What part of the day do you reach home from the school? (noon)
  - When does the sun sets? (evening)
  - What part of the day do you see stars and the moon in the sky? (night)
  - You have meals in the morning, afternoon and night. What are they called?
  - What do you use to know the exact time? (watch/clock)
- Recall that breakfast is done in the morning, lunch in the afternoon and dinner at night.
- Show a clock to the students.
- Point out to the numbers 1 to 12 marked on the clock.
- Make them observe the two hands of the clock.
- Pose: Are these hands of the same size? What does the short hand indicate? What is the long hand for? Seek response.
- Share with the students that:
  - The shorter hand is called the hour hand and the longer hand is the minute hand.
  - A very thin long hand moving fast is called the seconds hand.
- Display a clock in the class and explain each part.
- Set the hour hand at 4 and the minute hand at 12 on the clock and display it in the class.
- Tell the students that the time shown by the clock is 4 O’ clock.
- Write on the board: 4 O’ clock.
- Explain to them that if the minute hand is at 12, the time is read as O’ clock.
- Extend the activity by setting various times on the clock and let the students read and say aloud the time on the clock, till the time permits.
- Make pairs of students sitting next to each other.
- Distribute one paper plate, one straw and a drawing pin to each pair.
• Demonstrate and guide them to make a clock using the above items as:
  » Write the numbers from 1 to 12 on the paper plate.
  » Cut the straw into 2 pieces such that one piece is longer than the other.
  » Fix both the pieces of the straw in the centre of the paper plate with a
drawing pin.
  » The clock is ready to show the time.

• Instruct one student in each pair to speak out a time; say, 3 O’ clock.
• Ask the other student in the pair to move the hands of the clock and
show the time 3 O’ clock on the clock; here, minute hand at 12 and the
hour hand at 3.
• Repeat the activity where the second student tells the time and the first
one shows it on the clock.
• Move around in the class to help and guide them, if required.

Whenever the minute hand is at 12, the time is read as O’ clock. The minute
hand will point at 12 after every one hour.

Number of hours in a day and the number of minutes in each hour.

Time in half past an hour.

• Write the time in each case:
  » The hour hand is at 1 and the minute hand is at 12.
  » The hour hand is at 10 and the minute hand is at 12.
  » The shorter hand is at 6 and the longer hand is at 12.
  » The shorter hand is at 5 and the longer hand is at 12.

(Ans: 1 O’ clock, 10 O’ clock, 6 O’ clock and 5 O’ clock)

• Draw the hands on the clock and show the time:
  » 7 O’ clock, 9 O’ clock and 12 O’ clock.

• How many times will a clock show 5 O’ clock in one full day? (2 times)
• What is the time if the shorter hand is at 7 and the longer hand is at 12?
  (7 O’ clock)

• At what time (in O’ clock) will the minute hand and the hour hand be on
top of each other? How many times will this happen in a day?
• How many hours are there in a day? How many times will the minute
hand point to 12 in a day?

• Help your child read the time to the nearest O’ clock when he/she gets up
in the morning, goes to school, has lunch, goes out to play, has dinner, etc.
• Ask him/her to prepare a time table for his/her daily routine.
Lesson Plan - 2

Lesson Plan - 2

Grade - 1

Learning Objective

To name the days of a week.
To understand that there are 7 days in a week.

Material Required

Flash cards with one day (Monday to Sunday) written on each.

Stress Words

Week, Monday, Tuesday, Wednesday, Thursday, Friday Saturday, Sunday

Activity

• Ask the students: Which day is it today? Which days’ time table are you following today?
• Seek response.
• Introduce the day that is today; say today is Tuesday.
• Pose: Which day was yesterday? Which day will be tomorrow?
• Appreciate the students if they answer correctly.
• Instruct all the students to look at their time table and answer the following questions:
  » Which is the first day when you come to the school? (Monday)
  » Which day comes after Monday? (Tuesday)
  » Which day is always a holiday? (Sunday)
  » Which day comes before Friday? (Thursday)
  » How many days do you come to the school beginning from Monday till the end according to your time table?
• Write all the days on the board starting from Monday till Sunday.
• Ask the students to say aloud the names of the days from the board.
• Let them count the number of days, here 7.
• Explain to the students that all these 7 days make a week.
• Write on the board: 1 week = 7 days.
• Share with them that Monday is called the first day of the week, Tuesday is the second and so on.
• Distribute one flash card to each student.
• Give instructions to the students as under:
  » The teacher will ask a question based on the days of the week.
  » All the students whose day in the flash card corresponds to the answer will stand up and show their flash card.
• Ask questions such as:
  » Which day comes after Wednesday? (Thursday)
  » Which is the second day of the week? (Tuesday)
  » Which is the fifth day of the week? (Friday)
  » Thursday comes after _____. (Wednesday)
Which is the sixth day of the week? (Saturday)
Which day is always a holiday? (Sunday)
Which day comes after Sunday? (Monday)

- Appreciate the students for their efforts.
- Extend the activity by asking more questions till the time permits.

- There are 7 days in a week; Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday.
  Monday is the first day of the week.

- Fill in the blanks with suitable days:
  » ___ is the last day of the week.
  » ___ comes after Tuesday.
  » Friday comes before ______.
  » ___ is the fifth day of the week.
  » ___ days make a week.
  (Ans: Sunday, Wednesday, Thursday, Friday and 7)

- Write the days that come before and after the given day:
  » Wednesday (Tuesday, Thursday)
  » Sunday (Saturday, Monday)
  » Friday (Thursday, Saturday)

- Which day comes between Sunday and Tuesday? (Monday)
- Which day comes before Thursday? (Wednesday)

- If yesterday was Wednesday, what will be 2 days after tomorrow?
- If 15 August falls on Tuesday, which date will it be on the next Tuesday?

- Help your child make a toy train will empty match boxes or any other waste material. Encourage him/her to name the engine as the first day of the week and all the subsequent bogies with the names of the days in the proper order.
- Make your child to prepare a time table for his/her weekly routine for studying a particular subject and the day he/she would be allowed to play extra games or watch extra TV. This will inculcate the habit of following the time table and be regular in studies.
# Learning Objective
To understand that there are 12 months in a year.
To know and learn the names of the months of a year.

# Material Required
Calendar

# Stress Words
Year, January, February, March, April, May, June,
July, August, September, October, November, December

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## Activity
- Invite one student to write today’s date on the board, say; 2/9/2016
- Ask them to explain each part of the date. Seek response.
- Summarise students’ response as:
  - First number indicates today’s date, here 2.
  - Second number indicates the month, here 9.
  - Third is the year, here 2016.
- Pose:
  - What is the name of the current month? (September)
  - What number was used by you for the month few days ago? (8)
  - What all numbers do you use to write the month in the date?
  - Does it also include numbers like 13, 15, 20 or so?
  - Which number will you write instead of 2016 when you go to class 2?
- Seek response.
- Display a calendar in the class.
- Invite few students to mark the following dates on the calendar: Republic day, Independence Day, Gandhi Jayanti and their date of birth.
- Appreciate students’ efforts if they mark 26 January, 15 August and 2 October.
- Discuss that August, October, March, January, etc., all are the names of the month.
- Show each month on the calendar.
- Ask few students to count the total number of months. (12)
- Share with them that these 12 months together make one year.
- Make them observe that January is the first month and December is the last month of a year in the calendar.
- Write the names of all the months on the board in the proper order.
- Encourage the students to say aloud the names of the months one by one in the sequence.
- Help them pronounce each month’s name, if required.
- Divide the class into groups of 5 students each.
There are 12 months in a year. Year starts with the month of January and ends with December.

- Number of days of each month and the total number of days in a year. Introduction to leap year.
- Fill in the blanks with suitable days:
  - ___ is the fourth month of a year.
  - ____ comes after July.
  - ____ comes before January
  - A year has ___ months.
  (Ans: April, August, December, 12)
- Write the months that come before and after the given month:
  - March (February, April)
  - October (September, November)
  - June (May, July)
- Which is the third month of a year? (March)
- Which month comes between May and July? (June)
- What is a leap year? How many days are there in a leap year?
- If last month was February, which month will be three months later?
- Help your child mark the birthdays of all the family members on a calendar. Ask him/her to arrange them and find out whose birthday comes first in a year.
- Provide the names of some festivals and birthdays of some famous personalities to your child. Ask him/her to write the months in which they fall; say, Christmas, Republic Day, Children’s day, Teacher’s day, etc.
Lesson Plan - 1

Grade - 1

MONEY

Learning Objective
• To identify the notes and coins of different denominations.
• To calculate the total amount of money a person has.

Material Required
Indian currency notes and coins of various denominations (dummy notes)

Stress Words
Rupees, paisa, notes, coins

Activity
• Ask the students:
  » From where do you buy things, say, pencils, erasers, chocolate, ice creams, etc.?
  » What do you give to the shopkeeper to buy things?
• Seek response.
• Conclude using students’ response that we need money to buy things.
• Discuss that each country has its own currency.
• Display currency notes and coins of various denominations in the class.
• Share with them and write on the board:
  » The currency of India is rupees and paisa.
  » We denote rupees as ₹ and paisa as ‘p’.
  » 1 rupee = 100 paise; ₹1 = 100 p
• Elucidate on the board that twenty rupees is written as ₹20 and 50 paise is written as 50 p.
• Invite few students to denote using symbol, twenty five rupees, five hundred rupees, forty rupees, twenty paisa, fifty paisa, etc. on the board.
• Appreciate if they write ₹25, ₹500, ₹40, 20 p and 50 p respectively.
• Hold notes and coins one by one in your hand.
• Encourage the students to recognize the denomination of the notes and coins and say aloud their value in rupees and paisa.
• Make them observe that there are coins and notes for ₹1, ₹2, ₹5 and ₹10.
• Hold and show three notes to the class, say, one ₹50, one ₹20 and one ₹5.
• Help and guide the students to calculate and say aloud the total amount of money.
• Appreciate if they mention ₹75.
• Divide the class into groups of 4 students each.
• Distribute few currency notes and coins (dummy notes) to each group.
• Invite one student from one group.
• Hand over few notes to him/her; say, two ₹20 and one ₹5.
• Ask him/her to display these notes in the class.
• Instruct the rest of the 3 students of the group to calculate the total money the student is holding; here, ₹45.
• Repeat the activity by inviting one student from the next group and continue till all the groups are covered.
• Extend the activity by including coins along with notes.
• Encourage the students to calculate the total amount of money in rupees and paise.

The currency of India is rupees and paise.
₹1 = 100 p

The way in which money and paise are denoted together; say ₹20.50.

Conversion of rupees into paise.

• Four friends, Rehana, Smitha, Sakshi and Dipa had few notes with them. They identified their notes as given below. How much money does each one has?
  » Rehana : ₹50, ₹5, ₹10.
  » Smitha : ₹10, ₹10, ₹20.
  » Sakshi : ₹20, ₹20, ₹50.
  » Dipa : ₹50, ₹20.
  (Ans: ₹65, ₹40, ₹90 and ₹70)

• Answer the following questions based on the above situation:
  » Who has money more than fifty rupees? (Rehana, Sakshi and Dipa)
  » Which friend has the greatest amount of money? (Sakshi)
  » Who has the least amount of money? (Smitha)

• What is the value of three twenty rupee notes? (₹60)
• If ₹1 = 100 p, how many paise will make ₹2? (200 p)

• Arrange the following amount of money in ascending order: ₹55, ₹500, ₹5 and 50 p.
• Find the currency of countries like Australia, Japan, China, Europe and USA and their value in Indian rupees.

• Provide notes and coins of various denominations to your child. Help your child identify each note and coin by asking him/her to pick one hundred rupee note, twenty rupee note, two rupee coin, 10 rupee coin, etc.
• Show two notes of any denominations to your child. Encourage him/her to calculate and tell the total value of both the notes put together. Extend the activity by showing three notes or even more.
Lesson Plan - 2
Grade - 1

Learning Objective
- To exchange a coin or a note of a given value with other coins or notes.
- To enable students to buy objects with the given amount of money.

Material Required
Indian currency notes and coins of various denominations (fake notes)

Activity
- Display a 50 rupee note in the class and ask the students to say aloud its value.
- Invite one student and ask him/her to hold 2 twenty rupee notes and one ten rupee note.
- Invite another student and ask him/her to hold 5 ten rupee notes.
- Encourage the students to calculate the total amount of money each student is holding.
- Help them recall that both the students have ₹50 each with them.
- Make them observe that the value of one ₹50 note is same as the value of ₹20, ₹20 and ₹10 notes and also ₹10, ₹10, ₹10, ₹10 and ₹10 notes.
- Encourage the students to find various combinations of ₹10.
- Appreciate if they mention, two ₹5, five ₹2, ten ₹1, and so on.
- Conclude from the above activity that a coin or a note can be exchanged for the same value with a combination of other coins or notes of smaller denominations.
- Make pairs of students sitting next to each other.
- Distribute few currency notes and coins (dummy notes) to each pair.
- Write few amounts on the board such as: ₹60 and ₹30.
- Instruct each student in a pair to show the amount of ₹60 with different combinations of notes and coins.
- Move around in the class to help and guide them.
- Ask few students to share their combination of notes.
- Accept all the combinations; here ₹60 as: one note of ₹50 and one note of ₹10; three ₹20 notes; two ₹20 notes and two ₹10 notes, etc.
- Repeat the activity for ₹30 and other amounts, till time permits.
- Pose: If you wish to buy a chocolate worth ₹20 and a book priced ₹40, how much money do you need? Seek response.
- Discuss that with a given amount of money, we can buy things that have the same value or lesser value than the amount of money we have.
- Plan an activity with the same pair of students.
- Give instructions as follows:
  » Two pairs of students play together.
Each pair of students will display any 4 stationery items such as pencils, geometry box, book, scale etc.

Fix and display the price of each item and set up a mini shop.

Students from the neighbouring pair of students will act as customers.

The customers identify one item each that they wish to buy from the shopkeeper; so two items put together.

The shopkeepers and the customers will calculate the total amount of money required to buy the items.

The customers will exchange the money with the items.

Repeat the activity where the customers and shopkeepers exchange their roles.

- Extend the activity till time permits.

A given amount of money can be exchanged for the same value in different ways by using combination of other notes and coins.

- Form three combination of notes and/or coins for the given value of money:
  - ₹20 (two ₹10; four ₹5; ₹10, ₹5, ₹5)
  - ₹100 (two ₹50, ten ₹10; five ₹20)
  - ₹35 ( ₹20, ₹10, ₹5; three ₹10, ₹5; two ₹10, three ₹5)
  
  Note: Accept other combinations.

- The price list of few items is given below. Study the price list and find out how much money will each person need to buy the items.

  - Rita wants to buy a bag and a hair band:
  - Ankita wants to buy a water bottle and a pencil box:
  - Neha wants to buy chips, bag and a pencil box:
  
  (Ans: Rita: ₹120, Ankita: ₹85 and Neha: ₹145)

- How many ₹5 coins make ₹20? (4)
- How much money do you need if you wish to buy a book worth ₹50 and a pen of ₹20? (70)
- How many ₹5 coins make ₹100?
- Tina had two ₹100 notes, three ₹50 notes and two ₹20 notes. How much money does she have in all?
- Provide notes and coins of various denominations to your child. Encourage him/her to form different combinations of amount say, ₹100 with notes of other denominations.
- Play games like monopoly and business with your child. Encourage and help your child to do the transactions himself/herself. This will help the child to calculate the amount of money required to buy items.

Content Book Reference: Page 188, 189
Guided Practice: Page 148-150
Lesson Plan - 1

Grade - 1

DATA HANDLING

13

Learning Objective: To read and interpret picture graphs.

Material Required: Chart paper, crayons, beads of five different colours

Stress Words: Picture graph

Activity:

- **Note for teachers:** Prepare packets of beads of 5 different colours; say 2 blue, 4 red, 3 yellow, 1 black and 5 green, for each group of students. You may use other materials like connecting cubes, marbles, bindis, etc for the activity.
- Ask the students: Which is your favourite flavour of ice cream?
- Seek responses.
- Write down few favourite flavours on the board; say, chocolate, mango, strawberry and pista badam.
- Pose: How many students like chocolate ice cream? How many like mango ice cream? How many students like both mango and strawberry ice creams? Is it easy to answer such questions?
- Establish that if the collected information is arranged in the form of a table; all the questions can be answered by looking at the table at a glance.
- Draw a big table on a chart paper as shown.
- Write the names of the 4 flavours of ice creams in one column.
- Provide crayons to the students such as pink for strawberry, brown for chocolate, yellow for mango and green for pista.
- Invite each student one by one and ask them to put a circle against the ice cream they like the most in the second column of the table.

- Pista badam
- Chocolate
- Strawberry
- Mango

- Inform the students that such a table which represents information in the form of pictures is called a picture graph or pictograph.
- Bring their attention to the fact that the picture graph has as many rows as the types of ice creams. Each row shows the number of each type of ice cream.
• Encourage students to study the table carefully and answer questions such as:
  » How many students like mango ice cream? (7)
  » How many students like strawberry ice cream? (11)
  » How many students like pista badam ice cream? (5)
  » Are there any flavours that are liked by equal number of students? (chocolate and mango)
  » What is the total number of children? \(5 + 7 + 11 + 7 = 30\)
• Reiterate that the picture graph helped them answer the questions easily.
• Divide the class into groups of 4 students each.
• Distribute the packet of beads to each group of students; see note above.
• Instruct them to count the number of beads of each colour and represent the information in the form of a picture graph.
• Guide the students to use a circle as a picture to represent one bead; also use the same colour of the crayon to represent the colour of the bead.
• Move around in the class to help and guide them, if required.
• Write few questions on the board:
  » There are ___ yellow beads.
  » There are ___ blue beads.
  » Blue beads are ___ more than the black beads.
  » The number of red and green beads put together is ___.
  » There are a total of ___ beads.
• Encourage the students to study the picture graph and answer the questions.
• Discuss the answers and ask them to verify.
• Provide more picture graphs for the students to interpret it, till time permits.

A representation of data using pictures is called a picture graph or pictograph.

• Given below is a picture graph that shows the favourite sport of some students.

  *Tennis*  
  ![Tennis](image)

  *Cricket*  
  ![Cricket](image)

  *Football*  
  ![Football](image)

  *Hockey*  
  ![Hockey](image)

  *Badminton*  
  ![Badminton](image)
• Read the picture graph carefully and answer the following questions.
  » There are ____ students who like hockey.
  » ____ students like badminton.
  » ____ students like football.
  » The most popular sport is ____.
  » The least popular sport is ____.
  » There are a total of ____ students.
    (Ans: 6, 4, 7, cricket, tennis)

Ask questions based on the picture graph for colour of beads such as:
  » Which colour bead is most in the packet?
  » What is the total of yellow and black beads?

• How is a pictograph useful to interpret data?
• Mention any other way to interpret data?

• Help your child conduct a survey to find out the favourite drink of their friends; (orange, cola, lemon, mango and chocolate). Help them prepare a picture graph for the data collected.
• Encourage your child to interpret the picture graph by asking questions such as: How many friends like cola? How many of them like orange? And so on.