



PROFESSIONAL DEVELOPMENT  
FOR QUALITY EDUCATION

GRADE  
1

# LESSON PLANS FOR TEACHERS MATHEMATICS

Based on  
Curriculum 2020



Directorate of Curriculum and Teacher Education (DCTE)  
Khyber Pakhtunkhwa, Abbottabad

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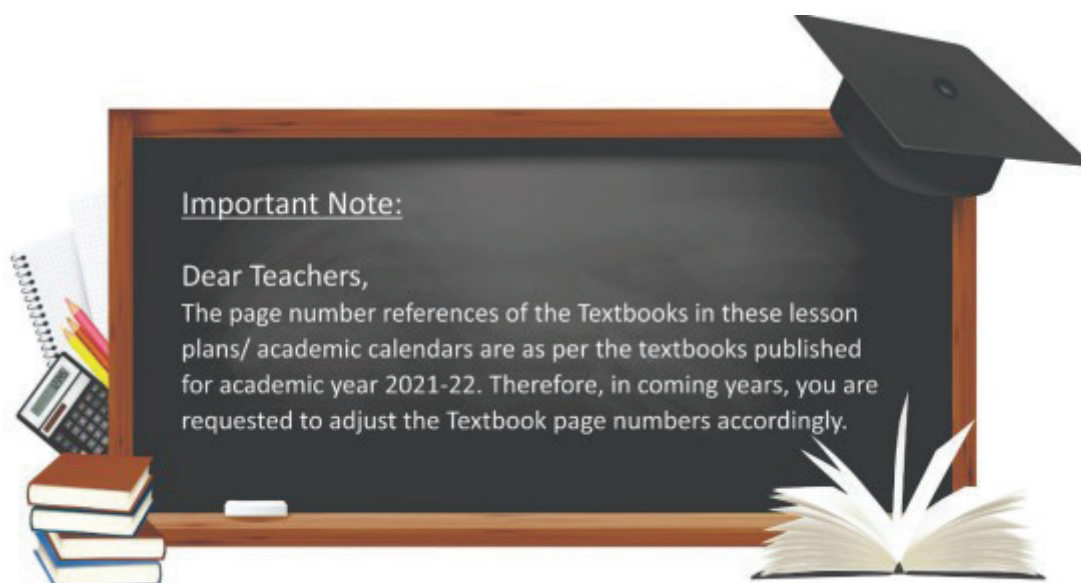
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**NOTIFICATION:**

**No.5730-5893/F.24/Vol-II/SLP/G-I/SS-M&E, dated: 30-08-2021** : Consequent upon its development and review by the respective development and review committees notified for the purpose, the Directorate of Curriculum and Teacher Education (DCTE), Khyber Pakhtunkhwa, Abbottabad, being the competent authority under the Khyber Pakhtunkhwa Supervision of Curricula, Textbooks and Maintenance of Standards of Education Act 2011, is pleased to notify the scripted lessons for Grade-I in the subjects of English, Urdu, Mathematics and General Knowledge based on Curriculum 2020 and the textbooks aligned on it for all educational institutions in Khyber Pakhtunkhwa for the Academic Year 2021-22 and onwards.

**DIRECTOR**

Copy forwarded for information and necessary action to the:

1. Secretary, Elementary & Secondary Education Department Govt. of Khyber Pakhtunkhwa, Peshawar.
2. Director, Elementary & Secondary Education Khyber Pakhtunkhwa.
3. Director, Professional Development, Khyber Pakhtunkhwa Landey Sarak Charsadda Road Larama, Peshawar.
4. All District Education Officers (M/F) in Khyber Pakhtunkhwa and Newly Merged Districts (NMDs).
5. All Sub Divisional Education Officers (M/F) in Khyber Pakhtunkhwa and Newly Merged Districts (NMDs).
6. Team Leader ASI-KESP, at Peshawar.
7. PS to Minister Elementary & Secondary Education, Khyber Pakhtunkhwa, Peshawar.
8. PS to the Director Local Office.

**ADDITIONAL DIRECTOR (SS)**

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# INTRODUCTION

Teaching and learning process in the classroom can vary concerning the ability, experience, and training of the teacher, which is why to standardize instruction, every good and effective teacher requires a lesson plan. The preparation of a lesson plan is important for clarity and comprehension regarding how the entire learning process will be handled as well as how students can understand and store the knowledge that is being passed onto them.

Lesson plans are vital for helping students accomplish their goals within a learning environment on a short-term and long-term basis. Lesson plans based on clearly defined Student Learning Outcomes (SLOs) concerning the textbooks ensure students are taught the required curriculum most efficiently. These ensure the teacher is adequately prepared and has a clear sense of direction for their lessons. In the context of Khyber Pakhtunkhwa, Lesson Plans are designed to support teachers to implement new pedagogical methods and help provide direction to instruction in the classrooms.

## Traditional Teaching Style:

Many teachers in Pakistan have come to rely on the textbook for teaching. They come into the classroom, ask students to open the textbook on a certain page, have students read a portion of the text, paraphrase the same and then ask students to answer questions that require them to reproduce material from the text. They teach every subject (the exception being mathematics) and every lesson in the same way. In some cases, the teacher is unable to complete the curriculum or impart the SLOs for a particular grade to the students effectively. Using lesson plans ensure standardization in teaching quality and provides a clear goal with relevant activities that can help students learn more effectively and achieve curriculum milestones.

## What is a Lesson Plan?

A lesson plan is a description of the instructions for the purpose of teaching the contents of the textbook of a particular subject and achieving Student Learning Outcomes (SLOs).

A lesson plan is the road map for teachers for the achievement of SLOs effectively during class time. The teachers design appropriate learning activities and develop strategies to obtain feedback on students' learning. A carefully constructed lesson plan allows the teacher to enter the classroom with more confidence and maximizes the chance of having a meaningful learning experience with the students.

A successful lesson plan addresses and integrates three key components:

- ◇ Student Learning Outcomes (SLOs).
- ◇ Learning activities.
- ◇ Assessment to check for students' understanding.

## Benefits of Lesson Planning

Most important benefits of lesson planning are to:

- Improve the quality of teaching and learning.
- Establish clarity of purpose.
- Facilitate achievement of student learning outcomes.
- Use available time effectively.
- Develop appropriate materials and ensure their effective use.
- Develop the confidence of teachers.

## Development Process of a Lesson Plan

Lesson plan usually starts with a thinking process. This thinking process is basically completed in four parts.

- **First**, determine the SLO; that is, what the children will learn, what they will be able to do upon completing the activities or work of the lesson.
- **Second**, determine what the students already know, before beginning of the lesson that can lead into a new curriculum of the day.
- **Third**, determine at least one way to assist the students in learning the new curriculum.
- **Fourth**, determine a way to evaluate the learning outcomes of the students.

## Components of a Lesson Plan

Common elements of lesson plans are; unit of study, a title/topic/problem, identification of student learning outcomes (SLOs), a sequence of learning activities including introductory, developmental and concluding activities, list of materials to be used and assessment strategies.

- ♦ **Choosing the Topic.** You can choose any topic from the textbook of the designated grade, a skill such as information gathering, a value such as peace, a current affair topic or an area of special concern such as the environmental pollution etc.
- ♦ **Identifying Student Learning Outcomes (SLOs) from the Curriculum.** The Curriculum has identified the student learning outcomes to be achieved for each topic. Identifying the student learning outcomes will help you to clarify the knowledge, skills, attitudes and values to be developed. Choose only one to three SLOs to develop your lesson (many more for a unit plan).
- ♦ **Material Resources.** A key part of planning is to ensure the identification, adaptation and development of resources required for the lesson for both teachers and students.
- **Development:**
  - ♦ **Introductory Activities:** Introductory activities are designed to introduce the topic, a subtopic or establish connection with the previous lesson. They are designed to build readiness, create interest, raise questions and explore what children already know about the topic, recall relevant information, motivate students and focus their attention on the topic/theme/problem to be studied. Introductory activities can include an arrangement of pictures or activities that stimulate interest and questions. Others may be based on the teacher posing questions, reading a poem or story on the teacher posing questions or reading a poem, story, etc. A test, an inventory, or a quiz may be used to find out what students know in order to build on their existing knowledge.
  - ♦ **Developmental Activities:** Developmental activities should emerge out of the introductory activities. There should be smooth transitions between the activities to provide a smooth learning sequence. These activities are designed to actualize the student learning outcomes. They introduce new concepts, skills and values or build on past learning and should be linked with each other. Applicative or demonstrative activities extend learning and develop the ability to use concepts and skills. Creative and expressive activities enrich learning and develop the ability to improvise and apply learning in original ways.
  - ♦ **Concluding the lesson:** Conclusion includes activities that serve to consolidate, summarize, or facilitate application of knowledge and skills of students to a new situation. They are generally related to the main idea of the lesson. The concluding activities could bring together the different main ideas of the unit. In this case, the emphasis should be on the educational outcomes and not on “putting on a show”.
  - ♦ **Assessment of Learning.** Assessment strategies can tell us how well or to what extent the student learning outcomes have been met. Assessment of learning is important in all phases of the lesson/unit from introduction to conclusion. A variety of tools can be used to assess the realization of the chosen learning outcomes. Some of these will be prepared as part of the learning activities. For example, the drawing and labeling of a map, the checklist for evaluating a discussion or simply asking questions relevant to the day’s topic. Other tools such as tests can be prepared ahead of time as well.
  - ♦ **Follow up/homework task.** This component includes follow up activities or home assignments to be undertaken by students at home.



# PREFACE

The Government of Khyber Pakhtunkhwa, Elementary and Secondary Education Department, is committed to improve the quality of teaching and learning by taking a number of reforms and initiatives for the improvement of quality education in line with the national and international emerging trends. Providing quality education at primary level is the first imperative step towards achieving this goal.

For this purpose, the Directorate of Curriculum and Teacher Education Khyber Pakhtunkhwa, at Abbottabad, has been entrusted the responsibility of developing and reviewing teachers' in-service and pre-service training materials for the improvement of pedagogical skills of teachers.

These quality improving initiatives also include development of teacher's guides of scripted lesson plans at primary level that support teachers to implement new pedagogical methods. These teacher guides are intended to assist teachers with the provision of content, effective teaching methods and tools for measuring what learners have gained. These guides will ensure an effective and participative engagement of teachers with students as activities included in these lesson plans are student-centered.

These teacher guides of Lesson Plans based on Student Learning Outcomes (SLOs) of Curriculum 2006 were developed for the first time in 2013. In 2018-2019, the Directorate of Curriculum & Teachers' Education Khyber Pakhtunkhwa undertook the task to revise and develop the Scripted Lesson Plans for Grade I-III according to the Academic Calendar on missing Students Learning Outcomes (SLOs).

As the Curriculum has been revised and new textbooks are developed in 2020 for Grades Pre-I to V, hence the need has been felt that these Lesson Plans for Grades I to V are to be revised, developed and aligned with the updated Curriculum 2020, accordingly.

The Directorate of Curriculum and Teacher Education Khyber Pakhtunkhwa constituted different committees comprising of Curriculum/Subject experts and teachers for developing these Lesson Plans based on Curriculum 2020. DCTE acknowledges the efforts of these experts for developing and reviewing these scripted lesson plans.

The Directorate of Curriculum and Teachers Education Khyber Pakhtunkhwa is also thankful to the Technical Assistance of Khyber Pakhtunkhwa Education Sector Programme (KESP) in the finalization of these lesson plans.

**Gohar Ali Khan**  
Director,  
Curriculum and Teacher Education  
Khyber Pakhtunkhwa, Abbottabad.



**Month**

**1**

# COUNTING 1 TO 9 AND NUMBER ZERO "0"



## STUDENT LEARNING OUTCOMES

- Identify numbers 1 – 9
- Identify 0 as a number

## INFORMATION FOR TEACHERS

The teacher should know:

- How to use hand gestures/terms/words/numbers.
- How many fingers to hold up while saying different numbers.
- That zero (0) means nothing.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



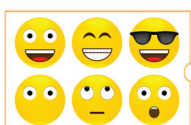
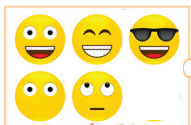
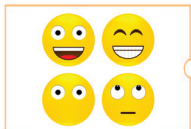
## MATERIALS / RESOURCES REQUIRED

- Board, Marker, Notebooks, Textbooks, Pencils, Chart, Small Items like bottle caps, erasers, leaves, pebbles, etc.



## INTRODUCTION

- Display the following chart on the board and ask students to count the number of objects.
- Guide the students to count different items on these charts.
- Hold up the correct number of fingers as well.
- Using a single type of item e.g. pencil. First place one pencil on the table and using fingers identify it as 1, next place another pencil identify that as 2, tell them when you place one pencil and then another one it is now called 2. Repeat until all 9 pencils are placed while explaining that when one another pencil is comes into the pile the total pencils are more than before. We count them so we can tell how many we have.





## DEVELOPMENT

### Activity 1

1. For this activity, focus on the numbers 1 to 5.
2. Sort and display different items on the teachers' desk. e.g., place 1 eraser, 2 pencils, 3 sharpeners, 4 leaves, and 5 pebbles/rocks on the table.
3. Ensure that no single item has more than 5 units.
4. Ask students to come up to the front of the class to answer questions.
5. For each question, the student should say the correct number and also show the correct number of fingers:
  - ◇ How many erasers do you see?
  - ◇ How many pencils do you see?
  - ◇ How many sharpeners do you see?
  - ◇ How many leaves do you see?
  - ◇ How many rocks do you see?

### Activity 2

1. For this activity, focus on the numbers 6 to 9.
2. Draw new images not already on the chart e.g., draw 6 hearts, 7 balls, 8 apples, and 9 stars.
3. Ask students to come up to the front of the class to answer the questions written below.
4. For each question, the student should say the correct number and also show the correct number of fingers:
  - ◇ How many hearts do you see?
  - ◇ How many balls do you see?
  - ◇ How many apples do you see?
  - ◇ How many stars do you see?

### Activity 3

1. To introduce the idea of zero as "nothing" this activity will be conducted in the classroom.
2. Place nine pencils on the table.
3. Ask ten students to come to the teacher's table.
4. Ask the 1st student to count these pencils and say the number out loud. The student will say "9".
5. Now ask each student, one by one, to pick one pencil from the table and count the remaining pencils and say that number out loud.
6. Continue this until the 10th student. When that student will not find any pencil on the table, he/she should say that there is nothing on the table or there is no pencil on the table.
7. Tell students that when there is "nothing" then we can say "there are zero pencils on the table".
8. Tell students that "nothing" is the same as "no thing" which is the same as "zero".
9. On the board, show students that when written numerically, "zero" is written as "0".



## CONCLUSION / SUM UP

Guide student discussion so that students recall the counting of various items. Students should also recall that the absence of an item or "nothing" is the same as "no thing" and in Mathematics it is represented by "0" and read as "zero".



## ASSESSMENT

1. Ask a few (1-9) students to line up at the front of the class.
2. Ask how many students can you count standing at the front of the class?
3. Do this several times with a different number of students lined up at the front.
4. After students are sent back to their seats, ask "how many students can you count standing at the front of the class?". Students should say "zero".



## HOMEWORK / FOLLOW UP

Assign a different number (0 - 9) to the students and ask them to bring any small item equal to the assigned number to the class.

## COUNTING



## STUDENT LEARNING OUTCOMES

- Read numbers up to 9 in numerals and words.
- Write numbers up to 9 in numerals and words.

## INFORMATION FOR TEACHERS

The teacher should:

1. Know how many fingers to hold up while saying different numbers.
2. Know the spellings of each number 0 to 9.
3. Understand that zero (0) means nothing.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Chart, Flashcards with numbers from 1 to 9.



## INTRODUCTION

1. Use the chart from lesson 1 and paste it on the board. If the chart is not available, then draw the pictures on the board.
2. Ensure that there are 2 blank spaces in front of each picture as shown below:



1

One



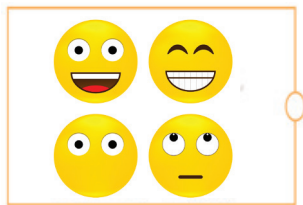
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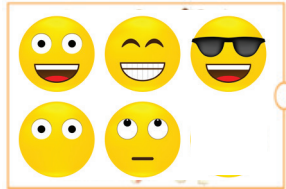


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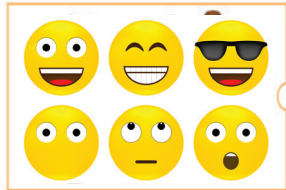
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- Ask students to raise their hands and say out loud the number of items in each row.
- When a student says “one” write the numeral in the second column followed by the words in the third column. This has been shown for 1 above.
- Repeat this for all numbers from 1 to 9.



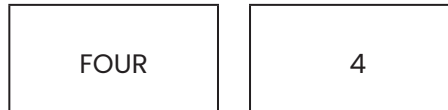
## DEVELOPMENT

### Activity 1

1. Divide the class into pairs and give them cards with numerals from 1 to 9 written on one side.
2. Ask the pair to work together and to write in words the number on the other side of the flashcard.
3. Tell students to get guidance from the chart on the board.

## Activity 2

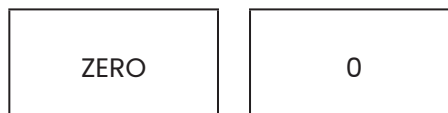
1. Collect the flashcards from Activity 1 and place them on your desk. There is no need to sort out the cards. They may be facing up or down.
2. Ask a student to come up to the desk, select a card and read what it says.
3. If the student comes up and selects the flashcard with the number 4, the student should say out loud "four". If the student is unable to read, other students should help.
4. Ask another student to come up to the board and select a card with the numeral 4.
5. Paste these two flashcards together on the board as shown below:



6. Repeat this until all numbers from 1 – 9 are paired on the board.
7. Provide guidance where needed.

## Activity 3

1. Ask students if they know what we say "nothing" in Maths?
2. Students should remember from the previous lesson that the word "zero" denotes nothing in mathematics. Guide students if necessary.
3. Write and paste the following two flashcards on the board and ask students to copy them in their notebooks.



## CONCLUSION / SUM UP

1. Draw the following table to summarize the topic.

Numeral Form	In Words Form
0	Zero
1	One
2	Two
3	Three
4	Four
5	Five
6	Six
7	Seven
8	Eight
9	Nine

2. Randomly select students to read the numbers (either numerals, words, or both) in any order.





## ASSESSMENT

1. Draw the table below on the writing board.
2. Ask the students to complete the table. These numbers are not in order.

Numeral Form	Word Form
9	
0	
	One
4	
7	
	Three
	Nine
	Six
2	
8	
	Five



## HOMEWORK / FOLLOW UP

Complete page 6 of the textbook in your notebooks.

## COUNTING



## STUDENT LEARNING OUTCOMES

- Count objects up to 9 and represent in numbers.

## INFORMATION FOR TEACHERS

- The teacher should know:
  - Counting with objects
  - Demonstrate the counting with different objects.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Chart with numbers from 1 to 9, Flashcards



## INTRODUCTION

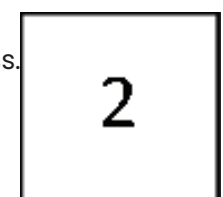
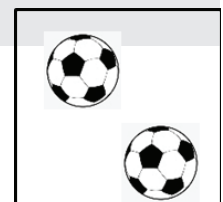
- Tell a student to count the doors and windows in the classroom.
- Place some books on your desk.
- Ask another student to count these books.
- The counting should be done out loud. Guide the student to begin with 1 and count upwards.
- Other students may give their feedback after the students have counted.



## DEVELOPMENT

## Activity 1

- This activity requires two types of flashcards.
  - Type 1 – The picture of a distinct number of objects from 0 to 9
  - Type 2 – The numerals from 0 – 9
- Place the picture flashcards in one pile and the numerals in another pile on the desk.
- Select 2 students at random and ask them to come to the front of the class.
- Ask the first student to pick a card from the first pile. Let's assume that the student picks the card shown on the right with two footballs.
- Now ask the second student to pick the card on which the corresponding number is written in numeral form. The student should pick the flashcard



showing the number 2.

6. Ask the pair if this matching is correct? Ask the entire class if they agree or disagree. Guide the students wherever required.
7. There will be a flashcard with no image drawn on it. This corresponds to the numeral 0. Give students some extra time to figure out this case.
8. Repeat the same activity for 10 pairs.
9. Do not replace the flashcards as each pair should pick a new numeral.



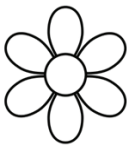

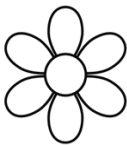



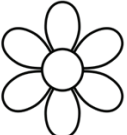

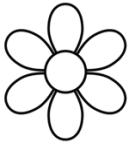



## CONCLUSION / SUM UP

1. Ask students how we can represent/show the number of different objects?
2. Guide student discussion so that the key takeaway is that when we count something we can represent it in words and numbers.



## ASSESSMENT

1. Draw the following table on the writing board and ask the students to answer the following questions:

2. How many cats do you see in the table?
3. How many flowers?
4. How many pencils?
5. If Ali had 1 cat and Ayesha had 2 cats who has more cats?
6. In the table above do you see more cats or do you see more pencils?



## HOMEWORK / FOLLOW UP

Ask students to complete the table given on page 6 of their textbooks.

# COUNTING



## STUDENT LEARNING OUTCOMES

- Match numbers 0 – 9 with objects.

## INFORMATION FOR TEACHERS

1. The teacher should know how to match a certain number of objects with their corresponding numerals on the chart.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Flashcards.



## INTRODUCTION

At the start of the lesson, help students recall basic counting and matching objects with numbers. You may ask the following questions:

- How many fingers are there on one hand? Count each finger and then count further up to 9.
- How many days are there in a week? As you say “Monday” hold up one finger, “Tuesday” hold up two fingers, and so on.



## DEVELOPMENT

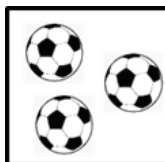
### Activity 1

1. This activity requires the design of two types of flashcards.
  - ♦ Type 1 – The numerals from 0 – 9
  - ♦ Type 2 – The picture of a distinct number of objects from 0 to 9
2. On the teacher’s desk, place the numeral flashcards in one pile and the pictures in another pile.
3. Select 2 students at random and ask them to come to the front of the class.
4. Ask the first student to pick a card from the numeral pile. Let’s assume that the student picks the card shown below.

3

5. Now ask the second student to pick the card on which the corresponding image is drawn.

The student should pick the following flashcard.



6. Ask the pair if this matching is correct? Ask the entire class if they agree or disagree. Guide the students wherever required.
7. For the number 0, there will be no image on the flashcard. Give students some extra time to figure out this case.
8. Repeat the same activity for 10 pairs.

## Activity 2

1. Draw the chart shown below and paste on the board.
2. Ask students to draw a line (or indicate where the line should be drawn) that matches the numeral with the correct number of shapes:

0	
1	
2	
3	
4	
5	
6	
7	
8	
9	



## CONCLUSION / SUM UP

Ask students how objects and numbers can be matched. Encourage students to give examples. Guide students where needed.



## ASSESSMENT

1. Draw the tables shown below on the board.
2. Divide the class into pairs (Student 1 and Student 2) and tell each pair to copy and complete the tables.
3. Students may draw any object of their own choice in the space in front of each number.






Student 1	
Number	Object
2	
4	
7	
6	
3	

Student 2	
Number	Object
5	
9	
0	
1	
8	



## HOMEWORK / FOLLOW UP

Draw the following table on the writing board and tell students to make something similar (with different items/objects that they like) in their notebooks.

Number	Object
0	
1	
2	
3	
4	
5	

# COUNTING BACKWARDS AND ORDERING NUMBERS



## STUDENT LEARNING OUTCOMES

- Count Backwards from 9.
- Arrange numbers in ascending and descending order (up to 9).

## INFORMATION FOR TEACHERS

1. The teacher should understand terms like ascending and descending order.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Flashcards.



## INTRODUCTION

1. Randomly pick students to read numbers from 0–9 such that the first student starts from 0 and the last student ends at 9.
2. Tell the students to remember their numbers.
3. Introduce backward counting, by asking the same students to say their number but this time the order will be reversed; starting with the student who said “9”, followed by “8”, then “7” until “0”.
4. Tell students that going from 0 to 9 is called ascending or increasing order i.e. we are going upward to a higher number and going from 9 to 0 is called descending or decreasing order i.e. we are going downward to a lower number. Make students write down these words in their notebooks with an example.
5. To increase means to put another one or to add another one. e.g. if you have a box with one pencil and you put in another one you have increased the total in the box to 2 pencils.
6. To decrease means to take out one or to remove one. e.g. if you have a box with two candies and you take one away you have decreased the total in the box to one candy.



## DEVELOPMENT

### Activity 1

1. This activity requires the design of multiple flashcards with numerals from 0 – 9.
2. Divide the class into pairs and give each pair flashcards with numerals from 0 to 9 written on them. Ensure that the flashcards are completely shuffled and in random order.
3. Ask students to put the number flashcards in ascending order on the table.
4. Ask the students to read loudly forwards from 0 to 9.



5. Now ask students to put the number flashcards in descending order on the table.
6. Ask the students to read loudly backward from 9 to 0.
7. Guide students where needed.

## Activity 2

1. Ask the students the following questions:
  - ◇ What is ascending order? How do we write numbers in ascending order?
  - ◇ What is descending order? How do we write numbers in descending order?
  - ◇ Guide student discussion so that they arrive at the correct understanding.
2. Place a box with 9 pencils on the teacher's desk and make 10 boxes horizontally on the board as shown below:

--	--	--	--	--	--	--	--	--	--

3. Ask one student to count the pencils and then write the number of pencils in the first horizontal box from left to right. Then the student should hold one pencil in his/her hand and not place it back in the box. The table should look like the one shown below:

9									
---	--	--	--	--	--	--	--	--	--

5. Now ask another student to count the number of pencils in the box. That student should also write the number in the table as shown below. The student should hold one pencil in his/her hand and not place it back in the box. See below:

9									
---	--	--	--	--	--	--	--	--	--

7. Now continue the same practice until the box of 9 pencils becomes empty and students have written the number in the table as shown below:

9	8	7	6	5	4	3	2	1	0
---	---	---	---	---	---	---	---	---	---

8. After the table is complete, ask the students to read from left to right.
9. Now tell the students when we count from 9 to 0 it is called descending order.
10. Now show the students the empty box and ask them how many pencils are in the box?
11. Write the number 0 on the right-most side. See above.
12. Now ask the students, who have the pencils in their hands, to come up one by one and start placing the pencils back in the box. Write the number 0 before students start the activity to show that the box was completely empty.
13. As each student places their pencil they write the number of pencils in the box in the relevant place in the table.
14. When all 9 students have put their pencils back in the box the completed table should look as shown below:

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

15. After the table is completed ask the students to read from left to right.
16. Now tell the students when we count from 0 to 9 it is called ascending order.



## CONCLUSION / SUM UP

Ask students to summarize the meaning of ascending and descending by giving examples for both. Students should recall:

- Ascending [forward counting] → smaller to greater [0-9]
- Descending [backward counting] → greater to smaller [9-0]



## ASSESSMENT

Ask the students to copy and complete the following questions in their notebooks.

i. Write the following numbers in ascending order

4	3	1

0	8	7

ii. Write the following numbers in descending order

3	4	9

2	0	5



## HOMEWORK / FOLLOW UP

Assign the relevant questions on pages 10 and 11 from the textbook.

# BEFORE, AFTER AND BETWEEN



## STUDENT LEARNING OUTCOMES

Identify which number (up to 9) comes:

- Before and after a given number
- Between two given numbers

## INFORMATION FOR TEACHERS

Teachers should be able to identify numbers that come before, after, and between two numbers.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Flashcards.



## INTRODUCTION

1. Choose 3 students at random and assigns them a number; the first student shall be called "1", the 2nd student shall be called "2", the 3rd student shall be called "3" for this activity.
2. Send all 3 students out of the class and tell "1" to enter the class and stand in front of the class. Now ask "2" to enter the class and stand in front. Lastly, ask "3" to enter the class and stand in front of the class.
3. Ask the students the following questions:
  - ♦ Who entered the class first?
  - ♦ Who entered the class after "1"?
  - ♦ Who entered the class after "2"?
  - ♦ Who entered the class before "2"?
  - ♦ Who entered the class before "3"?
  - ♦ Who came between "1" and "3"?
4. Ensure that students develop an understanding of the words before, after, and between.



## DEVELOPMENT

### Activity 1

1. Randomly select 10 students and give them cards with the numbers 0 to 9 written on them.

2. Randomly select one of the students and ask them to come to the front of the class.
3. Ask students the following questions:
  - ◇ which number does the student have?
  - ◇ what number comes before it?
  - ◇ What number comes after it?
4. Repeat this activity with students with different numbers.
5. Tell students to note the numbers (before and after) in their notebooks.

## Activity 2

1. Randomly select 10 students from the class as done in Activity 1.
2. Ask students which have a number gap between them (e.g. the students with card numbers 3 and 5) to come to the front of the class.
3. Ask the remaining students which number comes between or in the middle of these two numbers?
4. Repeat this activity with different students and different numbers.
5. Tell students to note each example in their notebooks.



## CONCLUSION / SUM UP

Conclude the activity by asking students to share examples of numbers that come before a number, after a number, or between two given numbers (such as 3 and 5 or 4 and 6).



## ASSESSMENT

1. Write numbers from 0 to 9 on the board and the following questions. Ask students to tick "✓" the correct word (before, after, or between) as shown in the example.
2. Example: 4 comes (before / after✓ / between) 3
3. 7 comes (before / after / between) 6
4. 3 comes (before / after / between) 4
5. 6 comes (before / after / between) 5 and 7.
6. 1 comes (before / after / between) 0



## HOMEWORK / FOLLOW UP

Assign the relevant questions on page 13 from the textbook.

**Month**

**2**

# NUMBER TEN “10” AND PLACE VALUE



## STUDENT LEARNING OUTCOMES

- Identify 10 as a 2-digit number.
- Compare and order the numbers 0-10.

## INFORMATION FOR TEACHERS

The teacher should know:

1. The number 10 is the first and smallest 2-digit number
2. How to compare and order numbers from 0 to 10.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Writing Board, Marker, Notebooks, Textbooks, Pencils, Flashcards, Glass



## INTRODUCTION

1. Write the numbers from 0 to 9 on the writing board and ask the students to read the numbers one by one.
2. Ask the students what number comes after 9?
3. Take their responses and guide them to arrive at the correct answer i.e., “10”.
4. Students should copy the following in their notebooks which shows 10 objects (lightning flashes), the numeral 10, and the written word “ten”.



10      Ten



## DEVELOPMENT

### Activity 1

1. Ask one of the students to place a glass on the table and ask students to put a pencil, one by one, into the glass with counting.
2. Make sure that you ask students how many pencils are in the glass when it is empty? Ensure that all students say “zero”.
3. As each student puts a pencil in the glass make sure they say the number of pencils in the glass out loud. Pause at “9”.

- Now put one more pencil in the glass and ask students how many pencils are there in the glass now?
- Take their responses, guide them to the correct answer i.e., "10".
- Now point to "ten" and "10" written on the writing board and ask one student to read aloud.
- Tell students that 10 is a two-digit number.

### Activity 2

- Make 4 groups in the class and randomly distribute flashcards with numbers from 0 to 10 written on them. Make sure each group has more than 6 cards.
- Ask one student from each group to stand at the front of the class with their flashcards.
- The student should sort the flashcards, first in decreasing/descending order (from 10 to 0) and then in ascending / increasing order (from 0 to 10) on your desk.
- Group members should guide the students on how to sort the cards.
- Ask the students:
  - What number comes after 9?
  - What number comes before 10?
  - What is the difference between 9 and 10? The expected answer is that 10 is a 2-digit number whereas 9 is a 1-digit number and when you add one to 9 you get 10.
- Guide the students where needed.



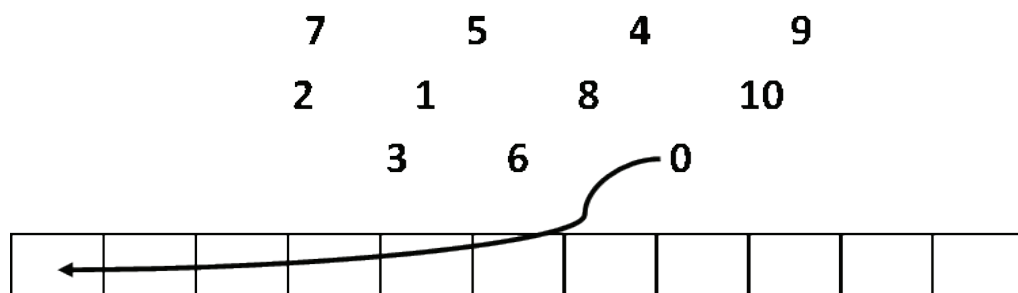
### CONCLUSION / SUM UP

- Ask students what comes after 9 if we write numbers in ascending order?
- Students should highlight that if we write numbers in ascending order 10 will come after 9 as 10 is larger than 9.



### ASSESSMENT

- Write the numbers from 0 to 10 in a jumbled manner and draw an empty table on the board as shown below:



- Ask the students to come up to the board and draw an arrow to indicate which number should go in which box if we write the numbers in increasing order.



### HOMEWORK / FOLLOW UP

Assign the students to write numbers from 0 to 10 in their notebooks.



## NUMBERS 0 – 99



## STUDENT LEARNING OUTCOMES

- Read numbers up to 99.
- Write numbers up to 99.

## INFORMATION FOR TEACHERS

The teacher should:

1. Read the unit and develop understanding on the use of certain terms/words /numbers prior to the lesson.
2. Know the concept of place value for ones and tens.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Writing Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Chart, Multiple Flashcards with numbers from 1 to 9



## INTRODUCTION

1. Write the number 10 on the writing board and ask the students to read this number. Students should say "10" based on previous knowledge.
2. Ask the students how many digits are there in 10.
3. Take their responses and guide them to arrive at the correct answer i.e. it has two digits, the ones digit and the tens digit.
4. Write the following on the board:

TENS	ONES
1	0

5. Tell students that the number 10 has 0 in the ones place and 1 in the tens place.
6. Ask students what will be the next number? Students will not know the concept of 11 so ask students what comes after 0. Students should say 1.
7. Tell students we keep digit at tens place the same and increase 0 at ones place to make it 1. This number is called "eleven". Show students the new number on the table as shown below:

TENS	ONES
1	0
1	1

8. Ask students what number comes after this number 11 “eleven”? Guide students to arrive at 12. Tell students that this number is called “twelve”. Show students the new number on the table as shown below:

TENS	ONES
1	0
1	1
1	2

9. Continue to say all the numbers out loud “thirteen”, “fourteen”, “fifteen” and so on. Keep writing each number in the table until you reach 19, “nineteen”. The table should look like it does below:

TENS	ONES
1	0
1	1
1	2
.	.
.	.
1	9

10. Ask students what will be the next number? Give students a few moments to think.
11. Tell students that when we get to 9 in the ones place we cannot go any further so we increase the tens place and reset the 9 to make it 0. Show students the updated table below and introduce the number 20. Say “twenty” out loud.

TENS	ONES
1	0
1	1
1	2
.	.
.	.
1	9
20	20

This number increases by 1

This number resets to 0

12. Tell students that today we will learn to read and write two-digit numbers up to 99.



## DEVELOPMENT

### Activity 1

1. Paste a chart as shown below on the writing board and ask students to come forward one by one and say out loud the number of items drawn in each box (left most column). This should be done for all numbers 10 to 20. Guide students if needed.
2. When a student says "ten" write the numeral in the second column. This has been shown for 10 below.


Draw ten lines in this box	10
Draw eleven lines in this box	
Draw twelve lines in this box	
Draw thirteen lines in this box	
Draw fourteen lines in this box	
Draw fifteen lines in this box	
Draw sixteen lines in this box	
Draw seventeen lines in this box	
Draw eighteen lines in this box	
Draw nineteen lines in this box	
Draw twenty lines in this box	

### Activity 2

1. Paste a chart or write as shown below on the board and ask students to repeat each number out loud.
2. Say the numeral in the first column, for e.g. "twenty" and then draw some lines or small shapes in the second column. This has been demonstrated for 10 and 20 below.

10	
20	
30	
40	
50	
60	

70	
80	
90	

- Repeat the process for all the numbers given in the table (up to 90).
- Students should draw this table in their notebooks and write each number for their reference.
- Guide the students about packet of five is 

### Activity 3

- Divide the class into two groups.
- The groups will be called the "Tens Group" and the "Ones Group"
- Distribute flashcards with numbers from 2 to 9 among the students of the "Tens Group" and flashcards with 0 to 9 to the "Ones Group".
- With their flashcards, ask for a random student from the Tens Group to come up to the front of the class and a random student from the Ones Group to come to the front. Say the flashcards held up by the students are 4 (Tens Group) and 7 (Ones Group).
- Ensure that the students stand in the correct order. Tens Group student on the left and Ones Group student on the right.
- Ask the students what the number is. Give students a few minutes to think and discuss.
- Tell students that the way to do read this number is to first imagine a zero next to the number written on the Tens Group Card i.e. imagine it is 40. Say this number out loud.
- Students should say "Forty".
- Then tell students to say the number written on the Units Group Card i.e. 7. Students will say "seven".
- As a final step, say the two together to read the number 47 as "forty-seven".
- Repeat the process with other students and numbers.
- Ensure that students write each example in their notebooks.



### CONCLUSION / SUM UP

- Ask students why we write 20 after 19 or 30 after 29? Students should re-cap that when we get to 9 in the ones place we cannot go any further so we increase the tens place and reset the 9 to make it 0. See introduction above.
- Guide student activity so that they can count objects up to 99, say the numbers, and write the number in numerals.



### ASSESSMENT

- Write various numbers such as 0, 11, 15, 21, 25, 36, 44, 59, 60, 71, 82, 93, etc. on the board and ask the students to read the numbers out loud.
- Say various numbers (from 0 to 99) out loud and the students should write those numbers in numerals in their notebooks.



### HOMEWORK / FOLLOW UP

The students should write numbers (in numerals) from 0 to 99 in their notebooks.

# FORWARD COUNTING AND BACKWARD COUNTING



## STUDENT LEARNING OUTCOMES

- Count forward and backward up to 99

## INFORMATION FOR TEACHERS

The teacher should know how to count forward and backward from any number between 0 and 99.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Flashcards.



## INTRODUCTION

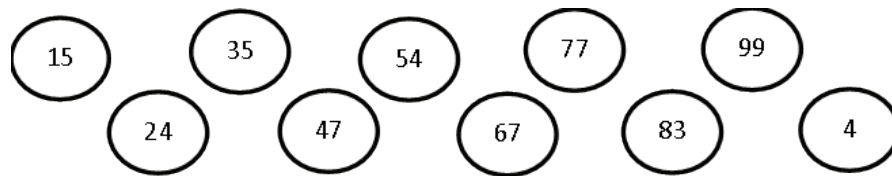
- Ask students to start counting from 0. Students should say out loud "0, 1, 2, 3, 4..."
- Let students count up to 20.
- Tell students that this was counting forward or upward.
- Ask students "what is a countdown?" Tell students to look at page 11 on their textbooks for help.
- Let students discuss amongst themselves for a few minutes. Take students responses.
- Tell students that a countdown or backward count is when we count the numbers downward and say out loud "10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0". Indicate to students to join in the countdown and say the numbers out loud as well.
- Ask the students to count downward from 20 now.
- Write the number on the board in descending order to help the students. Pay special attention and guide "... 13, 12, 11, 10, 9, 8, 7..."
- Tell students that in today's lesson they will learn about counting forwards and counting backward.



## DEVELOPMENT

### Activity 1

- Divide the students into pairs.
- Give each pair a random flashcard with a number written on it.
- Some sample flashcards are shown below:



4. Tell each pair that for their given flashcard, one student will count the next 10 numbers upward and the other student will count the next ten numbers downward.
5. e.g., if a pair has the flashcard with the number 47 on it, then one student will count upward "47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57" and the other student will count downward "47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37".
6. Write the numbers on the board as the students say them.
7. Other students should be allowed to help.
8. Ask other pairs to come to the front of the class and based on the number given on their flashcards, also count up and down from that number.
9. Provide guidance wherever needed.



## CONCLUSION / SUM UP

Ask students to give examples of forward and backward counting by starting with any number between 10 – 90.



## ASSESSMENT

1. Ask the student to copy and complete the following table:

Number	Forward Count (10 numbers)	Backward Count (10 numbers)
45	46, 47, 48, 49, 50, 51, 52, 53, 54, 55	44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34
32		
79		

2. Provide feedback and guidance where needed.



## HOMEWORK / FOLLOW UP

Students should revise numbers from 0 to 99 (previous homework) and write numbers from 99 to 0 (new task) in their notebooks.

# PLACE VALUE



## STUDENT LEARNING OUTCOMES

- Recognize the place value of a specific digit in a 2-digit number (tens and ones).

## INFORMATION FOR TEACHERS

- The teacher should know the concept of place value for ones and tens.



## DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD



## MATERIALS / RESOURCES REQUIRED

- Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Glasses, Straws, Rubber Band, Bundles of 10 ones.



## INTRODUCTION

- Place two empty glasses, side by side, on the teacher's table.
- In the glass placed to the right, put 9 straws one by one.
- Count every time you put a straw in the glass.
- When you put 1 straw ask the children how many straws are there in the glass. Students should say "1".
- When you put 2 straws students should say 2 and so on up to 9 straws.
- How many straws are now in the glass? Students should answer 9.
- Put 1 more straw in the glass and ask the students how many straws are there now? Guide students to say 10.
- Tell students that we will make a bundle of these 10 straws. Tie a rubber band around the straws to make a bundle of ten ones.
- Place the bundle in the left glass.
- Ask students if there are any straws left in the glass on the right? The response from the students should be "No" as the glass to the right should now be empty.
- Now label the glass on the left as tens and the glass on the right as ones.
- Tell students that every time ones get together and become 10, we bind them up to make them 1 bundle of 10 ones.



## DEVELOPMENT

### Activity 1

- Place two glasses on the table, a "Tens Glass" on the left and "Ones Glass" on the right.

- Put 3 bundles of 10 straws each (with a rubber band around each) in the left glass and 4 separate straws in the right glass.
- Tell students that the bundles of 10 straws represent tens and the 4 straws represent ones.
- Ask students how many tens are in the left glass? Students should be able to count and say 3.
- Ask students how many ones are in the right glass? Guide students to the correct answer of 4.
- Make a table of ones and tens on the writing board

Tens	Ones

- Ask students which number is represented by the straws in both glasses? Give students a few minutes to think and response.
- Ask one of the students to write 3 under the Tens column.
- Ask another student to write 4 under the Ones column.
- Tell students that the number represented by the straws is 34 and the place value of 4 is ones and the place value of 3 is tens.

## Activity 2

- Ask the students to write the place value of the circled numbers. The first has been done for you.

Tens	Ones	Place Value
1	7	The place value of 1 is __tens__
3	5	The place value of 3 is _____
5	2	The place value of 2 is _____
8	6	The place value of 6 is _____
9	4	The place value of 9 is _____



## CONCLUSION / SUM UP

Conclude the activity by involving the students in explaining the place value of a two-digit number. Students should say that the numeral on the right of a two-digit number has a place value of ones and the digit on the left has a place value of tens.



## ASSESSMENT

- Write two-digit numbers like 29, 35, 63, 94, etc. on the writing board.
- Draw the given table on the writing board.

Tens	Ones

- Point to the number 29 and ask students how many tens are there? [Correct answer: 2] and how many ones are there? [Correct answer: 9]
- Ask one of the students to come forward and write the number 29 in the correct columns.
- Repeat the activity for the other numbers.



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on page 29.



## PLACE VALUE



## STUDENT LEARNING OUTCOMES

- Identify the place value of the specific digit in a 2-digit number.
- Decompose a number up to 99 to identify the value of a number in tens and ones place.

## INFORMATION FOR TEACHERS

The teacher should know the concept of place value for ones and tens.



## DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Flashcards, Rubber Bands, Matchsticks.



## INTRODUCTION

- Draw the following table on the writing board.

Tens	Ones

- Divide the students into groups of 2.
- Distribute matchsticks and rubber bands to each group. Ensure that more than 9 but less than 100 matchsticks are given to each pair.
- Ask students to put a rubber band around every bundle of 10 matchsticks. You should demonstrate how to do this to the entire class.
- There should, in most cases, be a few matchsticks that are free/unbound.
- Now ask each pair to come up to the board and give a short presentation and then fill in the table drawn on the board. e.g., if a pair has 2 bundles of 10 matchsticks and 7 free/unbound matchsticks they should come up to the board and say, "we have 2 tens and 7 ones". Guide the pair.
- Then each pair should write these numbers in the place value chart drawn on the board as shown. For the example given above the students will write:

Tens	Ones
2	7

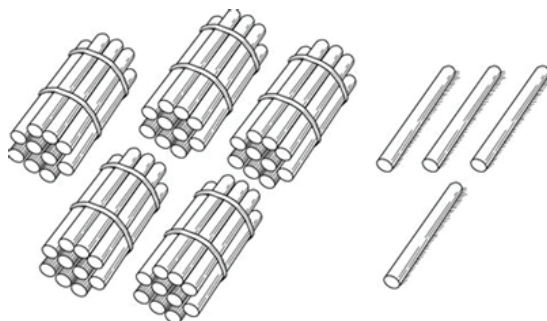
- Erase the number in the table and repeat the activity with other pairs.



## DEVELOPMENT

### Activity 1

1. Reshuffle the students forming new pairs.
2. Distribute flashcards with different 2-digit numbers written on them to each pair.
3. Ask students to use the sticks and rubber bands to represent each number e.g., if a pair of students has the flashcard with the number 54 on it then they should represent the number as follows:



4. Ask the students to tell the place value of each digit in the number by saying sentences like "54 has 5 tens and 4 ones and the place value of 4 is ones and 5 is tens".
5. Allow all pairs to share their work.
6. Guide students where needed.



## CONCLUSION / SUM UP

Ask students to explain the concept of place value for 2 digit numbers with examples. Students should say that for a 2-digit number (say 42) the digit on the right (2) has a place value of one and the digit on the left (4) has a place value of ten.



## ASSESSMENT

1. Draw the following table on the board.
2. Students should copy and complete the table shown below clearly indicating the ones and tens for each number in the place value chart.

Number	Tens	Ones
13	1	3
26		
33		
42		
56		
70		
87		
92		



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on page 29.

# COMPARING NUMBERS



## STUDENT LEARNING OUTCOMES

- Compare 1-digit and 2-digit numbers.

## INFORMATION FOR TEACHERS

Teacher should:

- Know that a 2-digit number is greater than a 1-digit number.
- Be able to compare numbers based on their place values.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**




## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk



## INTRODUCTION

- Hold up the flashcards with the numbers 10 and 8.
- Ask students which number is larger? Give students a few minutes to discuss.
- Draw the figure on the board to help students realize which number is larger

	
1 ten = 10 ones	8 ones = 8

- Tell students that 8 is a 1-digit number and 10 is a 2-digit number.
- Tell the students that all 2-digit numbers are greater than any 1-digit number. This is an important point; emphasize this to the students by showing them 8 pencils and 10 pencils, ask them which ones are more.
- Therefore, 10 is greater than 8. (You can also explain that if you put 2 more pencils with 8 you will get 10).
- Tell students that in today's lesson we will be comparing 1 and 2 digit numbers.



## DEVELOPMENT

### Activity 1

- Write the numbers 37 and 34 on the board.

2. Ask the students which number is larger? Give students a few minutes to discuss in small groups.
3. Some students may guess that 37 is larger than 34 as if comes after 34 but give students a structured approach to comparing numbers through place value.
4. Ask students how many tens does 37 have? Students should say that 37 has 3 tens.
5. Ask students how many tens does 34 have? Students should say that 34 also has 3 tens.
6. If there is a tie/draw, then we look at the ones digits. Ask students how many ones in 7? The answer should be 7.
7. Ask students how many ones in 4? The answer should be 4.
8. Which one is larger from 7 and 4? Students should answer 7.
9. Therefore, 37 is larger than 34.
10. Tell students if the digits in the tens place are the same, we look at the digits in the ones place to decide which number is larger.
11. Tell students that to compare 2-digit numbers we start the comparison by looking at the digits to the left. If these numbers are the same, then we compare the numbers written on the right.

## Activity 2

1. Copy and complete the following table in your notebooks:  
Write "bigger than" or "smaller than" in the blanks

6 is _____	than 9
24 is _____	than 21
37 is _____	than 47
58 is _____	than 50
90 is _____	than 99

2. Tell students to use the approach outlined in the introduction to determine which number is larger and which is smaller while comparing.
3. Guide the students to arrive at the correct answers.



## CONCLUSION / SUM UP

1. Ask the students to explain how to compare a one-digit number with a two-digit number. Students should say that any two-digit number is greater than anyone-digit number.
2. Ask the students to explain how to compare a two-digit number with another two-digit number. In two-digit numbers, the comparison should start with the tens digit.
3. If tens digits are of equal value, then we compare ones digits.



## ASSESSMENT

1. Ask the students to copy and complete the following questions in their notebooks.
  - ◇ Compare and colour the box with the larger number.

5	7	51	41	53	76	81	89
---	---	----	----	----	----	----	----

- ◇ Compare and colour the box with a smaller number.

15	13	34	49	73	79	98	93
----	----	----	----	----	----	----	----



## **HOMEWORK / FOLLOW UP**

Assign the relevant activities from the textbook on page 31.

**Month**

**3**

# ORDERING NUMBERS



## STUDENT LEARNING OUTCOMES

- Order the set of numbers from 0 to 99 in ascending and descending order.

## INFORMATION FOR TEACHERS

Teachers should know how to order numbers in ascending and descending order.

- Ascending Order:
  - Ascending order is the arrangement of numbers from the smallest to the largest.
  - For example, the numbers are in ascending order 15, 17, 29, 37
- Descending Order:
  - Descending order is an arrangement of numbers from the largest to the smallest.
  - For example the numbers: 45, 32, 26, 12 are arranged in descending order.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Chart, Flashcards



## INTRODUCTION

- Write the following numbers on the board.  
45                  26                  32                  67                  12
- Ask students to identify the smallest number? Based on their previous knowledge students should be able to say "12". If students struggle with identifying the smallest number tell them that 12 is the smallest as it has the fewest tens i.e. 1 only.
- Ask students to identify the largest number? Based on their previous knowledge students should be able to say "45". If students struggle with identifying the largest number tell them that 45 is the largest as it has the most tens i.e. 4.
- Ask students to compare the numbers 26, 67, and 32 (the remaining numbers).
- Students should be able to say that 26 is smaller because it has 2 tens.
- After that comes 32 as it has 3 tens and then comes 67 as it has 6 tens.
- Ask students to arrange all 5 numbers from smallest to largest or in ascending order.
- Guide students to arrive at the correct answer.  
12                  26                  32                  45                  67
- Now ask students to write the same set of numbers from largest to smallest or in descending order.
- Tell students that in today's lesson we will be ordering numbers in ascending and descending order.



## DEVELOPMENT

### Activity 1

1. Divide the students into pairs.
2. Give each pair a flashcard with 6 numbers from 0 to 99 written on it randomly e.g.

72	24
16	1
32	59

3. Tell each pair to write the numbers on their flashcards in ascending order.
4. Each pair should also write these numbers in descending order under a separate heading.
5. Once they complete their flashcard they will swap their flashcard with the pair sitting next to them.
6. Each pair should complete 6 distinct flashcards by the end of this activity.
7. Walkthrough the class and provide guidance wherever needed.



## CONCLUSION / SUM UP

Ask students to define ascending and descending order with examples of numbers from 0 to 99.



## ASSESSMENT

Draw the following table on the writing board. Ask the students to tick the correct box.

	Ascending Order	Descending Order
14, 15, 16, 21, 25, 30	✓	
40, 34, 32, 31, 28		
89, 90, 93, 95, 97		
79, 76, 73, 71, 69		



## HOMEWORK / FOLLOW UP

1. Assign the relevant activities from the textbook on page number 32.
2. Ask students to write on their notebooks, the ages of their 5 relatives (brother, sister, cousins, father, mother, friend, etc.) in ascending and descending order.



# BEFORE, AFTER AND BETWEEN



## STUDENT LEARNING OUTCOMES

Identify which number (up to 99) comes:

- Before and after a given number.
- Between two given numbers.

## INFORMATION FOR TEACHERS

Teachers should know how to identify numbers that come before, after, and between two numbers.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Flashcards



## INTRODUCTION

1. Revisit the concept of before, after, and between with the following activity.
2. Choose 4 students at random and assign them a number; the first student shall be called "1", the 2nd student shall be called "2", the 3rd student shall be called "3" and the 4th student shall be called "4" for this activity.
3. Send all 4 students out of the class and tell "1" to enter the class and stand in front of the class.
4. After that ask "2" to enter the class and stand in front.
5. Then ask "3" to enter the class and stand in front.
6. Ask 4 to enter the class and stand in front.
7. Ask the students the following questions:
  - ♦ Who entered the class first? Ans: 1
  - ♦ Who entered the class after "1"? Ans: 2
  - ♦ Who entered the class after "3"? Ans: 4
  - ♦ Who entered the class before "4"? Ans: 3
  - ♦ Who entered the class before "3"? Ans: 2
  - ♦ Who entered the class between "1" and "4"? Ans: 2 and 3
8. Ensure that students develop an understanding of the words before, after, and between from this example.



## DEVELOPMENT

### Activity 1

1. Select any 10 random students out of the class and give them flashcards containing ten different numbers from 0 to 99.
2. Select a student with a card at random and ask them to come to the front of the class.
3. Ask the students the following questions:
  - ◇ What number does the student have?
  - ◇ What number comes before it?
  - ◇ What number comes after it?
4. Repeat this activity with all 10 students who have different numbers.
5. Tell students to note each example in their notebooks.

### Activity 2

1. Randomly select 10 students from the class and give them cards containing the numbers 2, 4, 16, 18, 25, 28, 37, 40, 84, 87, 96, 99.
2. Select students which have a small number gap between them (no more than 3), e.g. the students with card numbers 37 and 40.
3. Ask these students to come to the front of the class.
4. Ask the remaining students which numbers come between these two numbers?
5. Tell students that they should start with 37 and ask "what comes after 37?" They should arrive at "38". Then the next step is to ask "what comes after 38?" They should arrive at 39. Then the next step is to ask "what comes after 39?" They should arrive at 40.
6. Alternatively, start with 40 and ask "what comes before 40?" They should arrive at "39". Then the next step is to ask "what comes before 39?" They should arrive at 38. Then the next step is to ask "what comes before 38?" They should arrive at 37.
7. Repeat this activity with different students and numbers. Ensure that only those flashcards are selected that have a gap of no more than 3 numbers e.g. 96 and 99.
8. Tell students to note each example in their notebooks.



## CONCLUSION / SUM UP

1. Ask students how can we find the numbers that come between two given numbers.
2. Students should say that to find the numbers that are between 2 given numbers we ask what comes after the smaller number and keep going until we reach the larger number or we ask what comes before the larger number and keep going until we reach the smaller number.



## ASSESSMENT

1. Write the following sequence numbers on the writing board and ask the students to find the missing numbers.
  - ◇ 71, ..., 73, ..., 75, 76, ..., ..., 79, ...
  - ◇ 91, 92, ..., 94, ..., 96, 97, ..., ..., 100



## HOMEWORK / FOLLOW UP

Assign the relevant questions on page 35 from the textbook.

# COUNT IN TENS



## STUDENT LEARNING OUTCOMES

- Count in tens and recognize 100 as a 3- digit number.

## INFORMATION FOR TEACHERS

Teachers should know how to count in tens up to 100.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**












## MATERIALS / RESOURCES REQUIRED

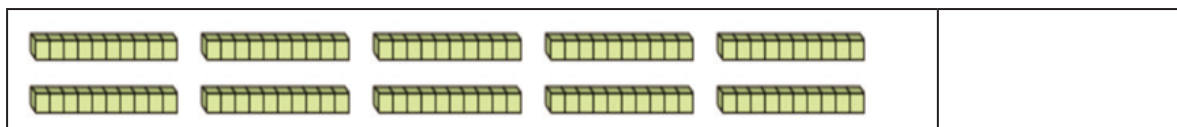
Board, Marker, Notebooks, Textbooks, Pencils, Chalk, Chart, Matchsticks, Rubber Bands



## INTRODUCTION

- Paste the chart on the board at the start of the activity.
- Ask students to count the number of ones in each block and write the number in the next column.

Blocks	Number
	10
	
	
	
	
	
	
	
	



3. Ensure that students also write the following in their notebooks.
  - ◇ 1 Ten = 10
  - ◇ 2 Tens = 20
  - ◇ 3 Tens = 30
  - ◇ 4 Tens = 40
  - ◇ 5 Tens = 50
  - ◇ 6 Tens = 60
  - ◇ 7 Tens = 70
  - ◇ 8 Tens = 80
  - ◇ 9 Tens = 90
  - ◇ 10 Tens = ?
4. Tell students that when we count only bundles/blocks of 10 we are “counting in tens” e.g., 10, 20, 30, 40, 50, 60, 70, 80, 90...



## DEVELOPMENT

### Activity 1

1. Ask students to count in tens like:
  - ◇ 10, 20, 30
  - ◇ 40, 50, 60
  - ◇ 70, 80, 90
2. Ask the students what will come next?
3. Expected answers from the students might be 99, 95, 92, 91. Some students might already know about 100.
4. Emphasize the correct answer and write “100” on the board. Write ones, tens, and hundreds above 100.
5. Ask students to point out what is different about 100? How is different from other numbers such as 90?
6. Tell students that hundred is the first 3 – digit number and the value of the ones place is 0, the value of the tens place is also 0 but the value of the hundreds place is 1.

### Activity 2

1. Divide the class into 10 groups.
2. Make 10 bundles of 10 matchsticks each bound by rubber bands.
3. Distribute the 10 bundles to the groups.
4. Ask each group to hold up their bundle of sticks and say how many sticks they have. They may remove the rubber band and count. They should say 10. Then they place their matchsticks on the teacher’s desk.
5. The next group should also do the same.
6. Then ask the class how many matchsticks are there on the teacher’s desk. Students should say 20.
7. Each group must first say how many matchsticks they have (10) and then bring their stack of matchsticks to the teacher’s desk.
8. Repeat this until all 10 bundles/stacks are on the teacher’s desk and students say “100”.

9. Tell the students, for 10 bundles we can write 100.
10. Once again, go over counting in tens with students by recapping how many matchsticks there were on the teacher's desk. Say out loud along with the students, "10, 20, 30, 40, 50, 60, 70, 80, 90, 100".



## CONCLUSION / SUM UP

1. Ask students what is counting in 10s and what makes 100 different from the numbers we have learned about earlier.
2. Guide student discussion so that they recall the following:
  - ◇ 1 Ten = 10
  - ◇ 2 Ten = 20
  - ◇ 3 Ten = 30
  - ◇ 4 Ten = 40
  - ◇ 5 Ten = 50
  - ◇ 6 Ten = 60
  - ◇ 7 Ten = 70
  - ◇ 8 Ten = 80
  - ◇ 9 Ten = 90
  - ◇ 10 Ten = 100
3. Students should say that 100 is a 3-digit number whereas earlier we had learned about 2-digit and 1-digit numbers.



## ASSESSMENT

1. Write the following on the board and tell students to fill in the blanks:
  - ◇ 1 Ten = 10
  - ◇ 5 Tens = \_\_\_\_\_
  - ◇ 7 Tens = \_\_\_\_\_
  - ◇ 8 Tens = \_\_\_\_\_
  - ◇ 10 Tens = \_\_\_\_\_



## HOMEWORK / FOLLOW UP

1. Write the following question on the board and ask the students to answer them in their notebooks:

Fill in the blanks.

3 tens = \_\_\_\_\_

6 tens = \_\_\_\_\_

9 tens = \_\_\_\_\_

10 tens = \_\_\_\_\_

## MISSING NUMBERS



## STUDENT LEARNING OUTCOMES

- Identify and write missing numbers in a sequence from 1 to 100.

## INFORMATION FOR TEACHERS

Teachers should be able to identify missing numbers in a sequence of numbers from 1 to 100.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Chalk, Chart of Written Numbers from 1 – 100.



## INTRODUCTION

- Display a chart of 1 to 100 numbers on the board for the students.
- Tell the students to read the chart carefully.
- Ask students to count:
  - 1 to 10 (1st student)
  - 11 to 20 (2nd student)
  - 21 to 30 (3rd student)
  - 31 to 40 (4th student)
  - 41 to 50 (5th student)
  - 51 to 60 (6th student)
  - 61 to 70 (7th student)
  - 71 to 80 (8th student)
  - 81 to 90 (9th student)
  - 91 to 100 (10th student)
- Tell students that these are sequences with no missing number.
- Today we will identify the missing numbers in the sequence.



## DEVELOPMENT

## Activity 1

- Write the following number sequence on the board

1	2		4	5	6	7	8		10	11	12		14	15	16			19	20		22	
---	---	--	---	---	---	---	---	--	----	----	----	--	----	----	----	--	--	----	----	--	----	--

- Point to the first blank space in the sequence and ask students what number comes there? To prompt students thinking ask them which number comes after 2 or before 4?
- Write 3 in the first blank space.
- Ask students to copy and complete the table given above.

## Activity 2

Ask students to work in pairs and write the missing numbers in the sequences given below:

a)	26	27	_____	29	_____	31	32	_____	_____	35
b)	67	_____	69	_____	71	72	_____	74	_____	76
c)	_____	85	86	87	_____	89	_____	91	_____	_____
d)	_____	92	_____	94	95	_____	_____	98	99	_____



## CONCLUSION / SUM UP

- Ask students how can we identify the missing numbers in a given sequence of numbers.
- Students should say that to identify missing numbers in a sequence of numbers we should ask which number comes before and/or after the numbers are given.



## ASSESSMENT

- Prepare the following chart and paste it on the board.
- Ask the students to come to the board and write the missing numbers.

	2				6		8		
11			14				18		20
21		23			26	27		29	
31				35		37	38		40
41			44		46			49	
51			54		56				60
61	62		64		66		68		70
71				75			78		80
81	82			85		87		89	
		93		95	96			99	



## HOMEWORK / FOLLOW UP

Assign the relevant questions on page 35 from the textbook.

# COUNTING



## STUDENT LEARNING OUTCOMES

Count and write numbers of objects in a given set.

## INFORMATION FOR TEACHERS

The teacher should:

1. Know about the different ways items and objects can be grouped making them easier to count.
2. Be familiar with counting in 10s.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



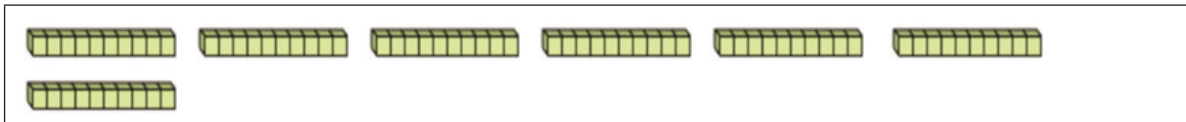
## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Chalk, Matches, Chart



## INTRODUCTION

1. Ask students how many ones are in the blocks shown below (draw these on the board)



2. The correct answer is 70 based on their previous knowledge of counting in 10s.
3. Tell students that in today's lesson they will count different objects and write the number.



## DEVELOPMENT

### Activity 1

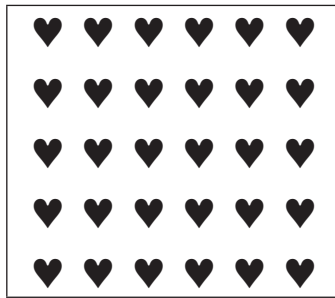
1. Ask students to work in pairs.
2. Take a handful of matches from a matchbox and distribute them to each pair.
3. Ensure that the matches are more than 10 but less than 100.
4. Ask the students to count the matches and verify the count.
5. Ask a student from each pair to come and write their count on the board.
6. Repeat this process of counting for all pairs.

### Activity 2

1. Paste the following chart on the board.



2. Ask students to count the set of hearts and write their number below.



3. Guide students to the correct count of 36 hearts.



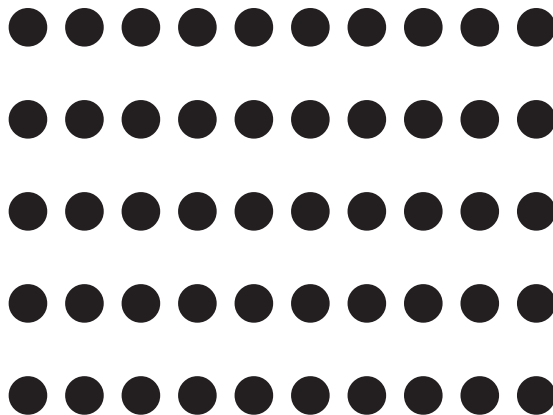
## CONCLUSION / SUM UP

Conclude the lesson by telling students that we have learned about counting objects and then writing the number of objects which were given in the set.



## ASSESSMENT

1. Draw the following on the writing board.
2. Ask students to count the set of balls and write their number below:



## HOMEWORK / FOLLOW UP

1. Count and write, the number of books and notebooks in your school bag.
2. Assign the relevant questions on page 35 from the textbook.

# ORDINAL NUMBERS



## STUDENT LEARNING OUTCOMES

Identify the position of objects using ordinal numbers such as first, second, ..., tenth including representations 1st, 2nd, ..., 10th through pictures.

## INFORMATION FOR TEACHERS

1. Teachers should know that ordinal numbers are used to place objects in order and also to identify their position.
2. The teacher should know that the order of different objects can be represented as 1st, 2nd, 3rd, ..., 10th.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Chalk, Chart showing objects in their ordinal positions.



## INTRODUCTION

1. Ask students about the speed of different animals i.e. elephant, horse, cheetah, and ant.
2. Create consensus among the students.
3. The ant is the slowest among the animals listed.
4. The elephant runs slowly but is faster than the ant.
5. The horse runs faster than the elephant.
6. The cheetah is the fastest animal on the list.
7. Tell the students that the animals listed above get into a race.
8. Ask the following questions from the students:
  - ◇ Which animal will win the race? Let students discuss amongst each other and then tell them that the cheetah is the winner of the race. Cheetah is the "first" and can be written as "1st". Emphasize how to write "1st".
  - ◇ Which animal will come after the cheetah? Let students discuss amongst each other and then tell them that the horse comes after the cheetah. The horse is the "second" and can be written as "2nd". Emphasize how to write "2nd".
  - ◇ Which animal will come after the horse? Let students discuss amongst each other and then tell them that the elephant comes after the horse. The elephant is the "third" and can be written as "3rd". Emphasize how to write "3rd".
  - ◇ Which animal will come after the elephant? Let students discuss amongst each other and then tell them that the slow ant comes after the elephant. The ant is the "fourth" and can be written as "4th". Emphasize how to write "4th".
9. Say loudly that in the race, the cheetah was the 1st, the horse was 2nd, the elephant was 3rd, and the ant was 4th.



## DEVELOPMENT

### Activity 1

1. Draw an empty table on the board or paste the chart.
2. Ask 10 random students to stand in a line at the front of the class.
3. Now starting from left to right, tell the 1st student to go back to his/her seat.
4. As the student returns to their seat, say "[student's name] is the first to return to their seat" and write in the first row in the table as shown below.
5. Repeat the same process with each student updating the table on the chart as they return to their seats. Involve students in saying the ordinal number.
6. After completing all 10 rows, tell students to copy the table below in their notebooks

Number	Ordinal Number in Words	Ordinal Number in numerals
1	First	1 <sup>st</sup>
2	Second	2 <sup>nd</sup>
3	Third	3 <sup>rd</sup>
4	Fourth	4 <sup>th</sup>
5	Fifth	5 <sup>th</sup>
6	Sixth	6 <sup>th</sup>
7	Seventh	7 <sup>th</sup>
8	Eighth	8 <sup>th</sup>
9	Ninth	9 <sup>th</sup>
10	Tenth	10 <sup>th</sup>

7. Tell students that numbers that help us identify positions are called ordinal numbers.



## CONCLUSION / SUM UP

1. Ask students how we can express the position of different objects through ordinal numbers.
2. Students should summarize that by using words like "First, second, Third, Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, Tenth" or by using 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th we can represent the order of different objects.



## ASSESSMENT

1. Take the students to the ground and make them participate in a race.
2. Make sure that there are 10 or fewer students in the race.
3. Ask the students about their position in the race.
4. Do this with different groups of students.
5. Upon returning to class, tell students to write their position in both words and numerals on the board.



## HOMEWORK / FOLLOW UP

Assign the relevant questions on page 37 from the textbook.

# ONE-TO-ONE CORRESPONDENCE



## STUDENT LEARNING OUTCOMES

Match objects having one to one correspondence

## INFORMATION FOR TEACHERS

The teacher should know about the one-to-one correspondence of objects such as cricket bat and ball, pencil and copy, horse and horse rider, etc., and conclude which object is more and which is less.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Chalk, Charts, Pictures of Cricket Bat, Cricket Ball, Toothbrush, Toothpaste, Pencil, Notebook.



## INTRODUCTION

1. Ask the following questions from the students.
2. Which object is related to the cricket bat? Answer: Cricket Ball.
3. Which object is related to the toothbrush? Answer: Toothpaste.
4. Which object is related to the pencil? answer: Paper.
5. Take the responses from the students and tell students the correct answers.
6. Ask students, "how many students are there in the classroom?".
7. Give students a few minutes to count. Verify the count.
8. Then ask how many math books are there in the classroom? Give students a few minutes to count. Verify the count.
  - ♦ Important: If there are as many books as students tell students that the students and books have a one-to-one correspondence.
  - ♦ Important: If there are more students than textbooks please write the count for both objects, students and textbooks, and then conclude that students are more than textbooks or textbooks are less than students.
9. Now tell the students that in today's lesson we will match objects having one-to-one correspondence.





## DEVELOPMENT



### Activity 1

1. Draw the following on the board or prepare the chart and paste it on the board.

- Tell students to come to the board and match the plates and cups given below and fill in the blanks. Use double arrows as shown on the board.

		Plates
		Cups

- After students have counted and filled in the blanks, write on the board:  
There are 7 plates and 3 cups.  
7 is more than 3  
3 is less than 7.
- Draw the following on the board and then ask students to match the birds and cats given below and fill in the blanks.

		Birds
		Cats

- After students have counted and filled in the blanks, write on the board:  
There are 4 birds and 2 cats.  
4 is more than 2  
2 is less than 4.

## Activity 2

- Place three baskets on the teachers' desk with pictures of locks in the 1st basket, pictures of cups in the 2nd basket, and pictures of spoons in the 3rd basket.
- Now distribute pictures of keys, plates, and bowls to students, ensuring that every student has a picture.
- Ask students to come to the teacher's desk and match their picture with one of the objects in the basket.
- After the matching activity, address the students having a picture of a lock and a key and tell all other students that they matched these pictures because a lock and a key have a 1-1 (one-to-one) correspondence.
- Similarly, tell the students that some students matched the pictures of a cup and a plate because they have 1-1 correspondence as well.
- Similarly addressing the students that matched spoons and bowls did so because of the 1-1 correspondence.




## CONCLUSION / SUM UP

- Conclude the activity by asking students to explain 1-1 correspondence for different objects from our daily life such as a student with a bag, a cycle with a cyclist, a lock with a key, etc.
- After matching objects, students should know how to conclude which object is more and which is less.



## ASSESSMENT

1. Copy and complete the following in your notebooks:

	<p>___ rackets</p> <p>___ shuttlecocks</p>
---	--

2. There are \_\_\_ rackets and \_\_\_ shuttlecocks.
3. \_\_\_ is more than \_\_\_.



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on page 38.

# COMPARING OBJECTS



## STUDENT LEARNING OUTCOMES

- Compare two or more groups of objects in terms of numbers.
- Identify the number of objects in two groups to show “more than” and “less than”.

## INFORMATION FOR TEACHERS

The teacher should know how to compare the number of objects in two or more groups in terms of their numbers (by counting) and then state which group has more objects and which group has fewer objects.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



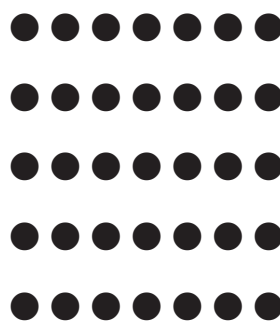
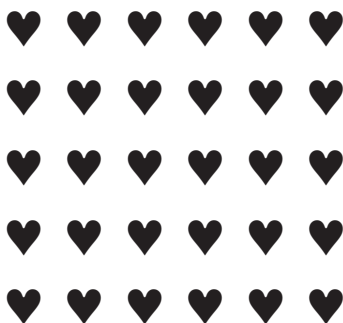
## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Sharpeners, Chalk, Charts,



## INTRODUCTION

- Paste the following chart on the board and ask students to count and write the number of objects in the box below:



--	--

- Students should count 36 hearts and 35 balls.
- Ask the students to discuss and then raise their hands if they know the correct answers.
- Write both statements on the board. Ask a student to circle the correct answer:

The hearts are more than/less than the circles. Answer: more than

◇ Fill in the blank:

36 is \_\_\_\_ more than 35. Answer: 1

Tell students to find out how much more or less they should start with the smaller number and count (on their fingers) until they reach the larger number. In this example, students should start counting from 35 until they reach 36. There is only a difference of 1.



## DEVELOPMENT

### Activity 1

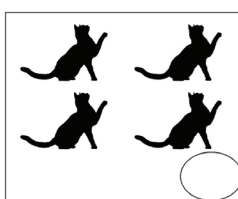
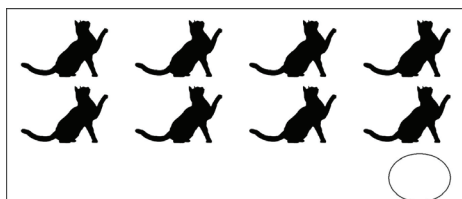
1. Draw the following pictures on the board or prepare and paste the chart on the board before the activity.
2. Count and compare the number of balls shown bellow



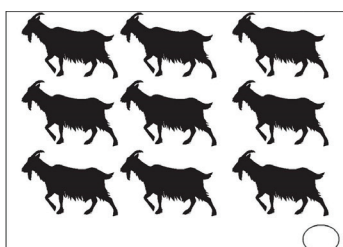
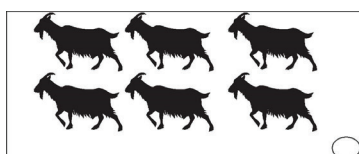
3. Give students a few minutes to count and take their responses.
4. Write the number of balls in the boxes.
5. Circle the correct answer:
  - ◇ 7 balls are less than/more than 9 balls.
6. Tell students to find out how much more or less they should start with the smaller number and count until they reach the larger number. In this example, students should start counting from 7 until they reach 9.
7. Ask a few students to find the difference for you and then demonstrate the correct answer. There is only a difference of 2.
8. Fill in the blank: So, 7 is \_\_\_\_\_ less than 9

### Activity 2

1. Paste the charts shown below or draw the pictures. Draw simple pictures as well.
2. Ask the students to tick (✓) the box which has more objects and fill them with the total number of objects in the box.



3. After students have counted and ticked the correct option ask them to circle the correct option below:
  - ◇ 8 cats are less than/more than 4 cats.
  - ◇ So, 8 is \_\_\_\_\_ more than 4



4. After students have counted and ticked the correct option ask them to circle the correct option below:
  - ◇ 6 goats are less than/more than 9 goats.
  - ◇ So, 6 is \_\_\_\_\_ less than 9





## CONCLUSION / SUM UP

1. Ask students, "how we can compare the number of objects in two groups?"
2. Students should say that we can compare different objects by counting and then saying which one is more or less.
3. Ask students how we can find out how much more or less the objects in one group are compared to the other.
4. Students should say that we start counting from the smaller number and count until we reach the larger number.



## ASSESSMENT

1. Ask the following questions:
  - ◇ 9 is \_\_\_\_\_ greater than 3
  - ◇ 4 is \_\_\_\_\_ less than 7
  - ◇ 7 is 3 greater than \_\_\_\_\_.



## HOMEWORK / FOLLOW UP

Assign the relevant questions on page 39 from the textbook.

**Month**

**4**

# HOW MUCH MORE



## STUDENT LEARNING OUTCOMES

- Compare numbers from 1 to 20 to identify “how much more” one is from another.

## INFORMATION FOR TEACHERS

Teachers should know:

- How to find the difference between two numbers by counting forward.
- That the number line may be used for finding how much more one number is from another.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



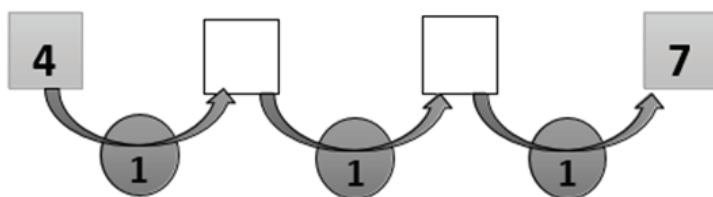
## MATERIALS / RESOURCES REQUIRED

Textbook, Writing Board, Marker/Chalk, Chart, Flashcards (Numbers from 1 to 20)



## INTRODUCTION

- Divide the students into pairs.
- Write the following real-life scenario on the board. Explain it to the students as well.
  - Attiya has 4 storybooks. Her sister, Aleema, has 7 storybooks.
- Ask students how many more storybooks does Aleema has than Attiya?
- Let students discuss the answer in pairs.
- Ask a few pairs to share their thoughts with the class.
- If students give 3 as an answer, ask them to explain.
- Now tell students, to find how many more books Aleema has than Attiya we start counting from 4 until we reach 7.
- Show students the chart below and hold up a finger for each step i.e., when you say “5” you should hold up one finger when you say “6” you should hold up two fingers and when you say “7” you hold up three fingers.



- Ask students how many steps were taken to reach 7 from 4?
- Students should say “3”.
- Tell students that Aleema has 3 more books than Attiya.

12. Ask a student to fill in the blank shown below:

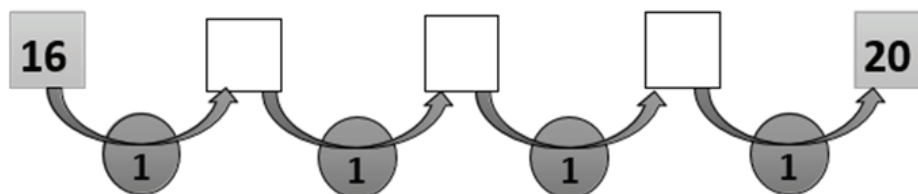
◇ 7 is \_\_\_\_ more than 4.



## DEVELOPMENT

### Activity 1

1. Divide the students into pairs.
2. Write the following real-life scenario on the board. Explain it to the students as well.  
Hooria is a 16-year-old student. She loves playing games on her mother's phone and wants to get her own. When she asks her baba for a phone, he says that she must wait until she is 20. How many years will Hooria have to wait to get a phone?
3. Allow students to raise their hands and give an answer.
4. If any student uses the "count forward" method and gives 4 as an answer, by counting from 16 to 20, then commend the answer.
5. If the students are not able to answer, show the correct steps on the writing board. See below:



6. Raise a finger with every step and ensure that 4 fingers are visible to all students when the count reaches 20 from 16, after 4 steps.
7. Tell students that Hooria has to wait 4 years to get the phone.
8. As a final step ask a student to fill in the blank shown below:  
20 is \_\_\_\_ more than 16.

### Activity 2

1. Ask students to work in pairs.
2. Distribute flashcards with different numbers (either from 1 to 10 or from 11 to 20) to each pair and make sure that the difference between the numbers is not more than 9.
3. Call a pair to the front of the class.
4. Ask them to hold up their 2 flashcards with different numbers.
5. Ask the students in the pair to compare which number is larger and which number is smaller.
6. Other students should also give their input.
7. Now ask the pair to find how much more the larger number is than the smaller number.
8. The students in the pair should count forward from the smaller number until they reach the larger number and then find "how much more".
9. Other students should give their input before you guide and verifies the answer.
10. Call another pair to the front of the class having two different number flashcards.
11. Repeat the steps mentioned above.
12. Ensure that students from all pairs come up to the front of the class and find how much more the larger number is than the smaller number.



## CONCLUSION / SUM UP

1. Ask students how to find how much more a larger number is than a smaller number.
2. Students should mention that they have learned to compare two numbers and find:
3. How much more one number is than another by counting forward from the smaller number until they reach the larger number.



## ASSESSMENT

1. Draw the table below on the writing board.
2. Individually ask students to come to the board and complete the following table.

Smaller Number	Larger Number	How Much More
5	8	
3	9	
13	17	
11	19	

3. After the students have completed the table, share the solution.



## HOMEWORK / FOLLOW UP

Assign the questions from the textbook on page 45 as homework.

# ADDITION OF 1-DIGIT NUMBERS



## STUDENT LEARNING OUTCOMES

- Recognize and use symbols of addition “+” and equality “=”
- Add two 1-digit numbers sum up to 9.

## INFORMATION FOR TEACHERS

Teachers should know:

- The meaning and correct usage of “+” and “=”
- How to pictorially add a one-digit number with a one-digit number by counting.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chart Paper



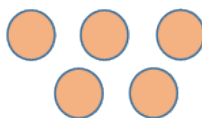
## INTRODUCTION

- Divide the students into pairs.
- Write the following real-life scenario on the board. Explain it to the students as well.  
Amir has 2 marbles. His best friend Fiaz gives him 5 more. How many marbles does Amir have altogether?”
- Let students discuss the question in pairs.
- Tell them to draw a picture to represent the question.
- Ask a few pairs to share their answers with the class.
- After taking student responses, draw a picture and write the words as shown below:



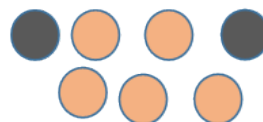
2

AND



5

EQUALS



SEVEN (7)

- Show students how the separate marbles are put together and then counted so that 2 and 5 equals 7.
- Ask students if they know the symbols they can use instead of writing “AND” and “EQUALS”.
- Take student responses and record them on the writing board.

10. Introduce the "+" and the "=" symbols to students as shown below:

$$\boxed{2} \quad \text{AND} \quad \boxed{5} \quad \text{EQUALS} \quad \boxed{7}$$

$$\boxed{2} \quad + \quad \boxed{5} \quad = \quad \boxed{7}$$

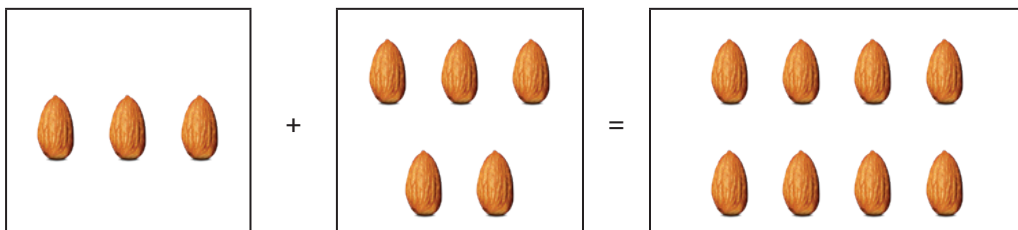
11. Tell students that we can use the "+" symbol instead of "AND" and use the "=" symbol instead of "EQUALS"



## DEVELOPMENT

### Activity 1

1. Write the following example on the writing board and ask students to solve it in pairs.  
There were 3 almonds in the jar. Ali put 5 more almonds in it. How many almonds does the jar have altogether?
2. Let students discuss the question in pairs.
3. Ask students to draw a picture of their solution.
4. Ask a few pairs to share their answers with the class.
5. Show students a picture solution as shown below:



6. After drawing a picture on the board tell students how the almonds are brought together. Count the almonds. Show students that 3 and 5 make 8.
7. Write the statement using numbers as well as shown below:

$$\boxed{3} \quad + \quad \boxed{5} \quad = \quad \boxed{8}$$



## CONCLUSION / SUM UP

Ask students to explain the steps involved in the addition of a 1-digit number with another 1-digit number. Students should mention that we can draw a picture to help with the addition.

# ADDITION OF 1-DIGIT NUMBERS



## STUDENT LEARNING OUTCOMES

- Recognize and use symbols of addition “+” and equality “=”
- Add two 1-digit numbers sum up to 9.

## INFORMATION FOR TEACHERS

Teachers should know:

1. The meaning and correct usage of “+” and “=”
2. How to pictorially add a one-digit number with a one-digit number by counting.



## INTRODUCTION

Tell the students that they will continue to explore the addition of a 1-digit number with another 1-digit number in this lesson..



## DEVELOPMENT

### Activity 2

1. Write the following example on the writing board and ask students to solve it in their notebooks.
2. Amna has 6 pencils. She bought 3 more pencils. How many pencils does Amna have now?
3. Let students discuss the answer in pairs.
4. Ask a few pairs to share their answers with the class.
5. After student discussion, share the correct answer with the students. Draw a picture as well as write  $6 + 3 = 9$ .



## CONCLUSION / SUM UP

Ask students to explain the steps involved in the addition of a 1-digit number with another 1-digit number. Students should mention that we can draw a picture to help with the addition and also highlight the meaning and correct usage of “+” and “=”.



## ASSESSMENT

1. Write the following question on the writing board and ask students to solve it on the board. Read the question and explain it to the students.
  - ♦ Irtiza has 5 stamps and Mustafa has 2 stamps. How many stamps do both of them have altogether?
2. After students have attempted the question, share the correct solution, with pictures, with the students.



## HOMEWORK / FOLLOW UP

Assign the relevant questions from the textbook on pages 46 to 50.



# ADDITION OF 2-DIGIT NUMBERS



## STUDENT LEARNING OUTCOMES

- Add 2-digit numbers to 10s.
- Add two 2-digit numbers.

## INFORMATION FOR TEACHERS

Teachers should know that numbers can be added by adding ones with ones and then tens with tens.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils



## INTRODUCTION

1. Divide the students into pairs.
2. Write the following real-life scenario on the board. Explain it to the students as well.  
A teacher has 47 pencils. She buys 30 more pencils for her class. How many pencils does the teacher have altogether?
3. Let students discuss the answer in pairs.
4. Ask a few pairs to share their answers with the class. Ask students why is it difficult to find the difference by counting on their fingers? Take student responses.
5. Show students the following pictorial representation of the question:

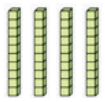

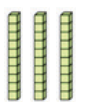



		TENS	ONES
Pencils the teacher has	$4 + 7$		
More pencils she buys	$3 + 0$		
Total Pencils	$7 + 7$		

6. Tell students that as a first step, they should add the ones i.e.,  $7 + 0 = 7$
7. Then as the next step, they should add the tens i.e.,  $4 + 3 = 7$ .
8. Tell students that by making a pictorial representation they can add a 2-digit number with a 2-digit number (multiple of 10).

9. Show students an addition table with numerals as well:

		TENS	ONES
Pencils the teacher has		4	7
More pencils she buys	+	3	0
Total Pencils		7	7

10. Now ask the students, what if the teacher had bought 32 pencils rather than 30.  
 11. Let students discuss the answer in pairs.  
 12. Ask a few pairs to share their answers with the class.  
 13. Once again show the students a pictorial representation of the revised question:

		TENS	ONES
Pencils the teacher has	$4 + 7$		
More pencils she buys	$3 + 2$		
Total Pencils	$7 + 9$		

14. Show students an addition table with numerals as well as shown below:

		TENS	ONES
Pencils the teacher has		4	7
More pencils she buys	+	3	2
Total Pencils		7	9

15. Remind students that by making a pictorial representation and by making a table they can add a 2-digit number with a 2-digit number, whether it is a multiple of 10 or not. Highlight that first the ones are added and then the tens.



## DEVELOPMENT

### Activity 1

1. Divide the students into pairs.  
 2. Write the following questions on the board.

$$\begin{array}{r} \text{i) } \begin{array}{cc} \text{tens} & \text{ones} \\ 5 & 3 \\ + & 2 & 0 \\ \hline \end{array} \end{array}$$

$$\text{ii) } \begin{array}{cc} \text{tens} & \text{ones} \\ 1 & 4 \\ + & 6 & 0 \\ \hline \end{array}$$

$$\text{iii) } \begin{array}{cc} \text{tens} & \text{ones} \\ 3 & 0 \\ + & 5 & 7 \\ \hline \end{array}$$

$$\text{iv) } \begin{array}{cc} \text{tens} & \text{ones} \\ 1 & 3 \\ + & 1 & 3 \\ \hline \end{array}$$

$$\text{v) } \begin{array}{cc} \text{tens} & \text{ones} \\ 8 & 1 \\ + & 1 & 6 \\ \hline \end{array}$$

$$\text{vi) } \begin{array}{cc} \text{tens} & \text{ones} \\ 6 & 4 \\ + & 3 & 3 \\ \hline \end{array}$$

- Let students discuss and attempt the questions in pairs.
- Ask a few pairs to share their answers with the class.
- After taking student responses, share the correct responses with the students.



## CONCLUSION / SUM UP

- Ask students for their input on the process of addition of 2-digit numbers with 2-digit numbers.
- Students should mention that numbers can be added by writing them as ones and tens, then adding the ones followed by adding the tens.
- Students should mention that they can represent the addition pictorially or with numerals.



## ASSESSMENT

- Write the following questions on the writing board and ask students to solve them in their notebooks.

$$\begin{array}{r} \text{i) } \begin{array}{cc} \text{tens} & \text{ones} \\ 4 & 0 \\ + & 4 & 0 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} \text{ii) } \begin{array}{cc} \text{tens} & \text{ones} \\ 2 & 0 \\ + & 6 & 9 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} \text{iii) } \begin{array}{cc} \text{tens} & \text{ones} \\ 4 & 4 \\ + & 2 & 0 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} \text{iv) } \begin{array}{cc} \text{tens} & \text{ones} \\ 2 & 2 \\ + & 1 & 7 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} \text{v) } \begin{array}{cc} \text{tens} & \text{ones} \\ 3 & 2 \\ + & 2 & 1 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} \text{vi) } \begin{array}{cc} \text{tens} & \text{ones} \\ 7 & 3 \\ + & 2 & 2 \\ \hline \end{array} \end{array}$$

- After students have attempted the question, share the correct solutions with the students.



## HOMEWORK / FOLLOW UP

Assign the relevant questions from the textbook on pages 53 – 54

## FINDING UNKNOWN NUMBERS



## STUDENT LEARNING OUTCOMES

Recognize the use of symbol to represent an unknown such as  $\square + 4 = 7$ ,  $3 + 4 = \square$ ,  $4 + \square = 7$  (include questions that sum up to 20)

## INFORMATION FOR TEACHERS

Teachers should know how to identify the unknown in a simple mathematical equation.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Charts



## INTRODUCTION

1. Paste the chart, on the board, with the picture of birds as shown below. The chart should be prepared before the lesson.



2. Tell students to discuss in pairs and then fill in the blanks.  
 \_\_\_\_\_ birds were sitting on the tree  
 \_\_\_\_\_ more birds flew and sat on the tree  
 \_\_\_\_\_ birds were on the tree altogether
3. Guide students during their discussion to count the birds.
4. Fill in the blanks as follows:  
 4 birds were sitting on the tree  
 2 more birds flew and sat on the tree  
 6 birds were on the tree altogether
5. Students should also discuss in pairs and complete the empty box shown below:

$$\boxed{4} + \boxed{\phantom{00}} = \boxed{6}$$

6. The filled box is shown below for the teacher:

$$\boxed{4} + \boxed{2} = \boxed{6}$$




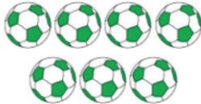





7. Ask students how can we identify the missing number if we did not have a picture story to guide us.
8. Let students think and discuss.
9. Take student responses.
10. Tell students that to identify the missing number we start counting forward from the given number up to the number on the right side of the equals sign i.e., start counting from 4 up to 6.
11. Hold up a finger for each step i.e., say "5" and hold up one finger, then say "6" and hold up two fingers. Therefore, the missing number is 2.
12. Tell students that in today's lesson they will be identifying the unknown number in the box.



## DEVELOPMENT

### Activity 1

1. Paste a chart with the following pictures showing addition.

 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">9</div>	+	 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;"></div>	=	 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">12</div>
 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;"></div>	+	 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">5</div>	=	 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">12</div>
 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">8</div>	+	 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">8</div>	=	 <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">16</div>

2. Tell students to work in pairs and write the correct numbers under each picture.
3. Take responses from some pairs
4. Take student input on each response.
5. Guide students during the activity and arrive at the correct answers.



## CONCLUSION / SUM UP

1. Ask students how can they identify unknown numbers in simple mathematical sentences.
2. Students should say that when pictures are given they may count the number of objects in the picture and write the relevant numbers under the pictures and verify the statements.
3. Students should also mention that to find the missing number in a mathematical

sentence, they may also use the counting forward strategy from the given number up to the number on the right side of the equals sign as outlined in the introductory section.



## ASSESSMENT

1. Write the following on the board:

$$\boxed{\phantom{000}} + \boxed{2} = \boxed{8}$$

2. Ask students to complete the empty box in their notebooks.
3. Encourage the students to count upwards from 2 to 8 to find the missing number. If some students are unable to do the question do not guide them yet.
4. Now show the following picture to the students:



5. Ask students who were unable to do the question, to now complete the empty box.
6. Guide all students where needed.



## HOMEWORK / FOLLOW UP

Assign the questions from the textbook on page 55 as homework.

# ADDITION USING MENTAL STRATEGIES



## STUDENT LEARNING OUTCOMES

Add numbers (up to 20) using mental strategies by using real-life examples.

## INFORMATION FOR TEACHERS

Teachers should know mental strategies when adding numbers such as separating tens and ones in a 2-digit number and then adding ones mentally.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chart



## INTRODUCTION

- Write the following question on the board (or paste a chart) and ask students to mentally answer the question without writing it.  
Tahir had 14 balloons. His sister gives him 3 more balloons. How many balloons did Tahir have altogether?
- Give students a few minutes to think about the question.
- Let students raise their hands and give their answers.
- Ask students to present a rationale for their answers.
- Students may say that they counted up 3 steps from 14 to arrive at 17.
- Commend this approach and elaborate on an alternative approach as mentioned below.
- Explain the following steps to students:
  - ◇ Step 1: Separate tens and ones       $14 = 10 + 4$
  - ◇ Step 2: Add the ones                   $4 + 3 = 7$
  - ◇ Step 3: Add the tens and answer     $10 + 7 = 17$



## DEVELOPMENT

### Activity 1

- Display a chart on the writing board with the following questions:  
Jamal has 11 toy cars. His father gifts him 5 more. How many toy cars does Jamal have altogether?  
Alina has 15 markers. Her brother gives her 2 more. How many markers does Alina have now?

A zoo has 12 animals. It gets 7 more from a nearby zoo. How many animals does the zoo have now?

2. Ask students to raise their hands if they can explain the mental strategy they used.
3. Guide students during the mental calculations.

### Activity 2

1. Write the following questions on the board.
2. Tell the students to add the following numbers by using the mental strategy
  - ◇  $10 + 8 = \square$
  - ◇  $4 + 11 = \square$
  - ◇  $15 + 4 = \square$
3. Students should raise their hands if they can explain the mental strategy they used.
4. Guide students during the mental calculations.



### CONCLUSION / SUM UP

Ask students how can they do addition using mental strategies. Students should give examples of addition and mention mental strategies such as separating tens and ones in a 2-digit number, adding ones mentally, and then adding the answer to the 10.



### ASSESSMENT

1. Students should copy and complete the following questions in their notebooks by using a mental strategy.  
 $12 + 4 = \square$   
Farhan had 10 Rupees in his pocket. His sister gave him 5 rupees more. How much money does Farhan have now?
2. Share the final solutions and the steps with the students.



### HOMEWORK / FOLLOW UP

Assign the questions from the textbook on page 56 as homework.



# ADDITION USING MENTAL STRATEGIES



## STUDENT LEARNING OUTCOMES

Construct addition sentences from given number stories.

## INFORMATION FOR TEACHERS

Teachers should know:

- That number stories are a way to show that math is connected to real life.
- How to identify the correct information from a number story and make an additional sentence from it.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chart



## INTRODUCTION

1. Write the following number story on the board.
  - ♦ Asad has 14 markers, and his brother gives him 10 more. How many markers does Ali have now?
2. Ask students how do we solve this problem?
3. Give students a few minutes to discuss in pairs.
4. Take students' responses.
5. Tell students that to solve the question we must add 14 and 10.
6. Tell students that Asad already had 14 markers and gets 10 more. Therefore, we add the numbers together to find how many he has altogether.
7. Tell students that when the numbers are written using the correct mathematical symbols it is called an "addition sentence" as shown below:
$$14 + 10 = 24$$
8. Tell students that in today's lesson we will be writing some addition sentences from given number stories.



## DEVELOPMENT

### Activity 1

1. Write the following number stories or paste a chart on the board. The chart should be prepared before the lesson.

Abid has 18 marbles and Ahmed has 40 marbles. How many marbles do they have altogether?

Zeeshan brought biscuits for Rs. 40 and toffees for Rs. 50. How much does he spend altogether?

Saman has 12 chocolates, and her sister gives her 7 more chocolates. How many chocolates will Saman have altogether?

2. Ask students to work in pairs and write the addition sentences for each number story in their notebooks.
3. Ask students to come up to the board and write the addition sentences and solve the questions.
4. Encourage other students to also give their input.
5. Also, provide guidance where needed and share the correct addition sentences after ensuring student participation.



## CONCLUSION / SUM UP

Ask students what a number story is and how do we construct addition sentences from number stories. Students should mention that number stories are a way to show that math is connected to real life. Students should highlight that it is important to identify the correct information from a number story to make an addition sentence from it.



## ASSESSMENT

1. Ask students to individually write the addition sentence for the following number story.  
Adnan brought wheat for Rs. 70 and corn for Rs. 60. How much did he pay to the shopkeeper?
2. After students have attempted the question share the correct addition sentence with the students.



## HOMEWORK / FOLLOW UP

Ask students to write addition for all the number of stories written on pages 53 to 54.

**Month**

**5**

# HOW MUCH LESS



## STUDENT LEARNING OUTCOMES

Compare numbers from 1-20 and find “how many less” one is than the other?

## INFORMATION FOR TEACHERS

Teachers should know how to find the difference between two numbers by counting backward.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



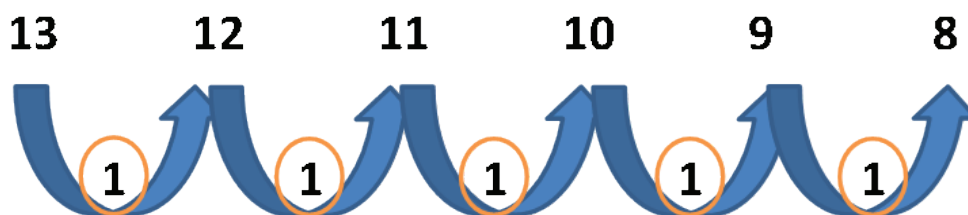
## MATERIALS / RESOURCES REQUIRED

Textbook, Writing Board, Marker/Chalk, Chart, Flashcards (Numbers from 1 to 20)



## INTRODUCTION

1. Divide the students into pairs.
2. Write the following real-life scenario on the board. Explain it to the students as well.  
Asma has 13 sweets. Her sister Amal has 8 sweets. How many fewer sweets does Amal have than Asma?  
◇ How many less sweets does Amal have than Asma?
3. Let students discuss the answer in their pairs.
4. Ask a few pairs to share their thoughts with the class.
5. If students give 5 as an answer, then ask them to explain their thinking process.
6. Now tell students, to find how many less sweets Amal has than Asma we start counting backward from 13 until we reach 8.
7. Show students the chart below and hold up a finger for each step i.e., say “12” and hold up one finger, say “11” and hold up two fingers, and so on until you reach 8 and hold up five fingers.



8. Ask students how many steps were taken to reach 8 from 13?
9. Students should say “5”.
10. Tell students that Amal has 5 less sweets than Asma.

11. As a final step ask a student to fill in the blank shown below (in their notebooks):
12. 8 is \_\_\_\_ less than 13.



## DEVELOPMENT

### Activity 1

1. Ask students to work in pairs.
2. Distribute flashcards with different numbers (from 1 to 20) to each pair and make sure that the difference between the numbers is not more than 9.
3. Call a pair to the front of the class.
4. Ask them to hold up their flashcards.
5. Ask the students in the pair to compare which number is larger and which number is smaller.
6. Other students should also give their input.
7. Now ask the pair to find how much less the smaller number is than the larger number.
8. The students in the pair should count backward (on their fingers) from the larger number until they reach the smaller number and then find "how much less".
9. Other students should give their input before the teacher also provides guidance and verifies the answer.
10. Call another pair to the front of the class.
11. Repeat the steps mentioned above.
12. Ensure that all pairs come up to the front of the class and find how much less the smaller number is than the larger number.



## CONCLUSION / SUM UP

1. Ask students how to find how much less the smaller number is than the larger number.
2. Students should mention that they have learned to compare two numbers and find how much less one number is than another by counting backward from the larger number until they reach the smaller number.



## ASSESSMENT

1. Ask students to complete the following table on the board.
2. The chart should be prepared before the lesson.

Larger Number of Objects	Smaller Number of Objects	How Much Less

3. After students are done, they should share their solutions.

4. Draw the following on the board and ask students to fill in the blanks



15 is \_\_\_\_\_ less than 20.

5. After students have attempted the question take student responses, guide, and then give a solution.



### **HOMEWORK / FOLLOW UP**

Assign the questions from the textbook on page 58 as homework.

# SUBTRACTION OF 1-DIGIT NUMBERS



## STUDENT LEARNING OUTCOMES

- Recognize subtraction as a difference and take away and use the symbol “-”.
- Subtract 1 - digit number from 1 - digit number.

## INFORMATION FOR TEACHERS

Teachers should know:

- how to pictorially subtract a one-digit number from a one-digit number by crossing out pictures.
- the correct usage of the minus “-” symbol.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



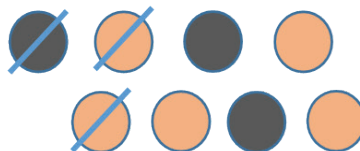
## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chart Paper



## INTRODUCTION

- Divide the students into pairs.
- Write the following real-life scenario on the board. Explain it to the students as well.  
Hooria had 8 marbles out of which she gave 3 marbles to her brother. How many marbles are left with Hooria?
- Let students discuss the question in pairs.
- Tell them to draw a picture to represent the question.
- Ask a few pairs to share their answers with the class.
- After taking student responses, draw objects representing the larger number and cut out the objects as the smaller number.
- Draw a picture with 8 marbles and cross out 3 marbles as shown below:



- Count the remaining marbles
- Show students how the remaining marbles are 5.
- Introduce the “-” and the “=” symbols to students as shown below:

8	MINUS	3	EQUALS	5
---	-------	---	--------	---

$$\boxed{8} - \boxed{3} = \boxed{5}$$

11. Tell students that we can use the “-” symbol instead of “MINUS” and use the “=” symbol instead of “EQUALS”



## DEVELOPMENT

### Activity 1

1. Write the following example on the writing board and ask students to solve it in pairs.  
There were 9 eggs in a tray. Hareem’s mother used 4 eggs to bake a cake. How many eggs were left in the tray?
2. Let students discuss the question in pairs.
3. Ask students to draw a picture of their solution.
4. Ask a few pairs to share their answers with the class.
5. Show students a picture solution as shown below:



6. Cross out 4 eggs.
7. Tell students how there were 9 eggs and 4 were used.
8. Count the remaining eggs. Show students that 5 eggs are left.
9. Write the statement using numbers as shown below:  
 $9 - 4 = 5$ .

### Activity 2

1. Write the following example on the writing board and ask students to solve it in their notebooks.  
Amna has 6 pencils. She gave away 3 pencils to her best friend. How many pencils does Amna have now?
2. Let students discuss the answer in pairs.
3. Ask a few pairs to share their answers with the class.
4. After student discussion, share the correct answer with students.
5. Draw a picture as well as write  $6 - 3 = 3$ .



## CONCLUSION / SUM UP

1. Ask students to explain the steps involved in the subtraction of a 1-digit number with another 1-digit number.
2. Students should mention that we can draw a picture and then cross out the number of objects that were taken away.
3. Students should highlight that to find how many objects are left, they count. Students should also touch upon the meaning and correct usage of “-” and “=”.



## ASSESSMENT

1. Write the following example on the writing board and ask students to solve it in their notebooks.



Irtiza has 5 stamps, and he gave 2 to Mustafa. How many stamps does Irtiza have left?

2. After students have attempted the question, share the correct solution, with pictures, with the students.



## **HOMEWORK / FOLLOW UP**

Assign the relevant questions from the textbook on pages 59 -62.

# SUBTRACTION OF 1-DIGIT NUMBERS FROM 2-DIGIT NUMBERS



## STUDENT LEARNING OUTCOMES

Subtract a 1-digit number from 2-digit number.

## INFORMATION FOR TEACHERS

Teachers should know:

- That to subtract a 1-digit number from a 2-digit number we need to count backwards, the same number of steps as the 1-digit number, from the 2-digit number.
- That numbers can be subtracted by writing them in tens and ones.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



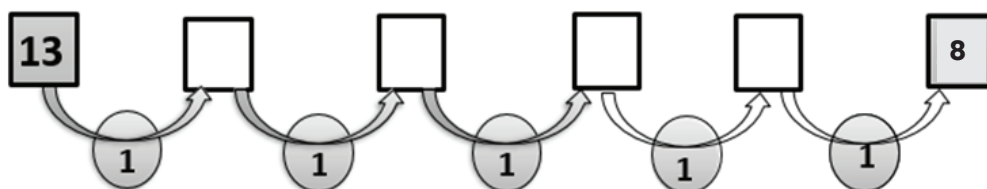
## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chart paper



## INTRODUCTION

1. Divide the students into pairs.
2. Write the following real-life scenario on the board. Explain it to the students as well.
  - ♦ Mina has 13 chocolates, and she gives her sister 5 chocolates.
3. How many chocolates will Mina have left?
4. Let students discuss the question in pairs.
5. Ask a few pairs to share their answers with the class.
6. After taking student responses, show students the following chart.



7. Tell students that to subtract a 1-digit number from a 2-digit number we count backwards, the same number of steps as the 1-digit number from the 2-digit number i.e. hold up a finger for each step i.e. when you say "12" you should hold up one finger, when you say "11" you should hold up two fingers, when you say "10" you should hold up three fingers, when you say "9" you should hold up four fingers, and finally when you say "8" you should be holding up five fingers as 5 had to be subtracted from 13.

Write  $13 - 5 = 8$  on the writing board.



## DEVELOPMENT

### Activity 1

1. Divide the students into pairs.
2. Write the following real-life scenario on the board. Explain it to the students as well.  
Umar had 27 sweets. His younger brother took 5 from him. How many sweets does Umar have left?
3. Let students discuss the answer in pairs.
4. Ask a few pairs to share their answers with the class.
5. Commend any student that counts backwards 5 steps from 27 and arrives at 22 as an answer.
6. Show students the following table:

		TENS	ONES
Sweets Umar has		2	7
Taken by his brother	-		5
Sweets left with Umar		2	2

7. Show students where each digit is written in the table.
8. Tell students that as a first step, they should subtract the ones i.e.,  $7 - 5 = 2$ . Draw a picture of 7 sweets and cross out 5 to show students that 2 are left.
9. Then as the next step, they should subtract the tens i.e.,  $2 - 0 = 2$ .
10. Tell students that if there is nothing written in the tens box then it means 0.
11. Tell students that by making a table they subtract a 1-digit number from a 2-digit number.
12. For the question above, they were able to find that after Umar's brother has taken away 5 sweets, Umar has 22 sweets left.



## CONCLUSION / SUM UP

1. Ask students how to subtract a 1-digit number from a 2-digit number.
2. Students should mention that to subtract a 1-digit number from a 2-digit number we need to count backwards, the same number of steps as the 1-digit number from the 2-digit number.
3. Furthermore, two 2-digit numbers can also be subtracted by writing them in tens and ones and first finding the difference between the ones and then the tens.



## ASSESSMENT

1. Write the following questions on the writing board and ask students to answer them in their notebooks.

tens    ones	tens    ones
2       5	1       8
-       4	-       7
_____	_____

2. Sana had 18 strawberries; she ate 6 strawberries of them. How many strawberries are left?

	T	O
Total strawberries	<input type="text"/>	<input type="text"/>
Eaten Strawberries	- <input type="text"/>	<input type="text"/>
Strawberries left	<hr/> <hr/>	<hr/> <hr/>



## **HOMEWORK / FOLLOW UP**

Assign the relevant questions from the textbook on pages 63 to 64.

# SUBTRACTION OF 2-DIGIT NUMBERS FROM 2-DIGIT NUMBERS



## STUDENT LEARNING OUTCOMES

- Subtract tens from 2-digit numbers
- Subtract a 2-digit number from a 2-digit number

## INFORMATION FOR TEACHERS

Teachers should know that numbers can be subtracted:

- by finding the difference between the ones and
- then finding the difference between the tens.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils



## INTRODUCTION

- Divide the students into pairs.
- Write the following real-life scenario on the board. Explain it to the students as well.  
A teacher has 34 pencils. She distributes 20 pencils among her students. How many pencils does the teacher have left?
- Let students discuss the answer in pairs.
- Ask a few pairs to share their answers with the class.
- Show students the following pictorial representation of the question:

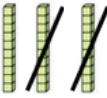



TENS	ONES
3	4
1	4

- Tell students that as a first step, they should subtract the ones i.e.,  $4 - 0 = 4$
- Then as the next step, they should subtract the tens i.e.,  $3 - 2 = 1$ .
- Tell students that by making a pictorial representation they can see how 2 tens were crossed out and 14 pencils were left.

9. Show students a table with numerals as well. See below:

		TENS	ONES
Pencils the teacher has		3	4
Pencils she distributes	-	2	0
Pencils she has left		1	4

10. Now ask the students, what if the teacher had given away 22 pencils rather than 20.  
 11. Let students discuss the answer in pairs.  
 12. Ask a few pairs to share their answers with the class.  
 13. The teacher should once again show the students a pictorial representation of the revised question:

TENS	ONES
3	4
	
1	2
	

14. Show students a table with numerals as well. See below:

		TENS	ONES
Pencils the teacher has		3	4
Pencils she distributes	-	2	2
Pencils she has left		1	2

15. Remind students that by making a pictorial representation and by making a table they can subtract a 2-digit number from a 2-digit number, whether it is a multiple of 10 or not. The teacher should highlight that first the ones are subtracted and then the tens.



## DEVELOPMENT

### Activity 1

1. Divide the students into pairs.  
 2. Write the following questions on the board.

i)      tens    ones

$$\begin{array}{r} 5 \quad 3 \\ - \quad 2 \quad 0 \\ \hline \end{array}$$

ii)      tens    ones

$$\begin{array}{r} 6 \quad 4 \\ - \quad 4 \quad 0 \\ \hline \end{array}$$

iii)      tens    ones

$$\begin{array}{r} 3 \quad 7 \\ - \quad 2 \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{iv)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 2 \quad \quad 3 \\ - \quad \quad 1 \quad \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 8 \quad \quad 7 \\ - \quad \quad 1 \quad \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{vi)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 5 \quad \quad 4 \\ - \quad \quad 3 \quad \quad 3 \\ \hline \end{array}$$

3. Let students discuss and attempt the questions in pairs.
4. Ask a few pairs to share their answers with the class.
5. After taking student responses, share the correct responses with the students.



## CONCLUSION / SUM UP

1. Ask students for their input on the process of finding the difference between two 2-digit numbers.
2. Students should mention that numbers can be subtracted by writing them in ones and tens and then first finding the difference between the ones and then the difference between the tens.
3. Students should mention that they can represent the subtraction pictorially and cross number bars or blocks to find how many are left.



## ASSESSMENT

1. Write the following questions on the writing board and ask students to individually solve them in their notebooks.

$$\begin{array}{r} \text{i)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 4 \quad \quad 0 \\ - \quad \quad 3 \quad \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{ii)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 6 \quad \quad 9 \\ - \quad \quad 3 \quad \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{iii)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 4 \quad \quad 4 \\ - \quad \quad 2 \quad \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{iv)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 2 \quad \quad 2 \\ - \quad \quad 1 \quad \quad 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{v)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 3 \quad \quad 2 \\ - \quad \quad 2 \quad \quad 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{vi)} \quad \text{tens} \quad \text{ones} \\ \quad \quad 7 \quad \quad 3 \\ - \quad \quad 2 \quad \quad 2 \\ \hline \end{array}$$

2. After students have attempted the questions, share the correct solutions with the students.



## HOMEWORK / FOLLOW UP

Assign the relevant questions from the textbook on pages 65 – 66

## FINDING UNKNOWN NUMBERS



## STUDENT LEARNING OUTCOMES

Recognize the use of symbol to represent an unknown such as  $9 - \square = 7$ ,  $9 - 7 = \square$

## INFORMATION FOR TEACHERS

Teachers should know how to identify the unknown in a simple mathematical equation.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Charts



## INTRODUCTION

- Paste the chart with the picture of sitting and flying away birds shown below on the writing board. The chart should be prepared before the lesson.
- Tell students to discuss in pairs and then fill in the blanks.
  - ◇ \_\_\_\_\_ birds were on the tree before any flew away
  - ◇ \_\_\_\_\_ birds flew away from the tree
  - ◇ \_\_\_\_\_ birds were left on the tree
- Guide students during their discussion to count the birds.
- Fill in the blanks as follows:
  - 6 birds were on the tree before any flew away
  - 2 birds flew away from the tree
  - 4 birds were left on the tree
- Students should also discuss in their pair and complete the empty box shown below:
 

6

-=

4
- Ask students how we can identify the missing number if we did not have a picture story to guide us.
- Let students think and discuss.
- Take student responses.
- Tell students that to identify the missing number we start counting backward from the given number to the number on the right side of the equals sign i.e., start counting from 6 until you get to 4.
- Hold up a finger for each step i.e., when you say “5” you should hold up one finger, when you say “4” you should hold up two fingers. Therefore, the missing number is 2.









- Hide the 6 and display the 2 and ask students how they would find the unknown number.
- Let students think and discuss.
- Take student responses.
- Tell students that in today's lesson they will be identifying the unknown number in the box.



## DEVELOPMENT

### Activity 1

- Paste a chart with the following pictures showing subtraction.

 <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">14</div> <div style="display: inline-block; width: 20px;">-</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px;"></div> <div style="display: inline-block; width: 20px;">=</div>	 <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">9</div>	
 <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px;"></div> <div style="display: inline-block; width: 20px;">-</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">4</div> <div style="display: inline-block; width: 20px;">=</div>	 <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">8</div>	
 <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">16</div> <div style="display: inline-block; width: 20px;">-</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">6</div> <div style="display: inline-block; width: 20px;">=</div>	 <div style="border: 1px solid black; padding: 5px; display: inline-block; width: 150px; text-align: center;">10</div>	

- Students should work in pairs and write the correct number in each box.
- Take responses from some pairs
- Take student input on each response.
- Guide students during the activity and arrive at the correct answers.
- These have been shown in blue only for the teacher.



## CONCLUSION / SUM UP

- Ask students how they can identify unknown numbers in simple mathematical sentences.
- Students should say that when pictures are given, they may count the number of objects in the picture and write the relevant numbers under the pictures and verify the statements.
- Students should also mention that to find the missing number in a mathematical sentence, they may also use a counting backward strategy from the given number up to the number on the right hand side of the equals sign.



## ASSESSMENT

1. Write the following on the board:

$$\boxed{\phantom{00}} - \boxed{3} = \boxed{4}$$

2. Ask students to complete the empty box.
3. Guide all students where needed.



## HOMEWORK / FOLLOW UP

Assign the questions from the textbook on page 68 as homework.

# SUBTRACTION USING MENTAL STRATEGIES



## STUDENT LEARNING OUTCOMES

Subtract the numbers (up to 20) using mental strategies involving real-life situations.

## INFORMATION FOR TEACHERS

Teachers should know mental strategies when subtracting numbers such as separating tens and ones in a 2-digit number and then subtracting the ones mentally.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Textbooks, Pencils, Chart



## INTRODUCTION

- Write the following question on the board (or paste a chart) and ask students to use a mental strategy (without writing) to answer the question.  
Tahir had 14 balloons. He gave his sister 3 balloons. How many balloons did Tahir have left?
- Give students a few minutes to think about the question.
- Let students raise their hands and give their answers.
- Ask students to present a rationale for their answers.
- Students may say that they counted backward 3 steps from 14 to arrive at 11.
- Praise this approach and elaborate on an alternative approach as mentioned below.
- Explain the following steps to students:
  - ◇ Step 1: Separate tens and ones       $14 = 10 + 4$
  - ◇ Step 2: Subtract the ones               $4 - 3 = 1$
  - ◇ Step 3: Add the tens and answer       $10 + 1 = 11$



## DEVELOPMENT

### Activity 1

- Display a chart on the writing board with the following questions:
  - ◇ Jamal has 16 toy cars. He gifts 5 of them to his cousin. How many toy cars does Jamal have left?
  - ◇ Alina has 19 markers. She gives her younger brother 4 of them. How many markers does Alina have left?

- ◇ A zoo has 19 animals. It donates 7 of them to a nearby zoo. How many animals does the zoo have left?
- 2. Ask students to raise their hands if they can explain their thinking through the solution.
- 3. Guide students during the mental calculations.

### Activity 2

1. Write the following questions on the board.
2. Tell the students to subtract the following numbers by using the mental strategy:  
 $19 - 8 = \square$   
 $16 - 3 = \square$   
 $19 - 4 = \square$
3. Students should raise their hands if they can explain their thinking through the solution.
4. Guide students during the mental calculations.



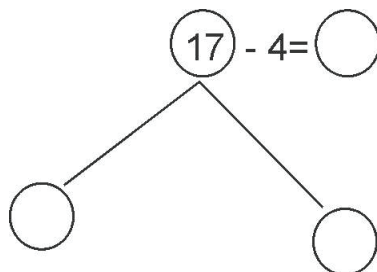
### CONCLUSION / SUM UP

1. Ask students how to do subtraction by using mental strategies.
2. Students should give examples of subtraction and mention mental strategies such as separating tens and ones in a 2-digit number and then finding the difference between the ones mentally and then adding the answer to the 10.



### ASSESSMENT

1. Ask students to copy and complete the following questions. Students should do mental math.



2. Zain had 18 rupees in his pocket. He bought a pen for Rs. 8. How much money is left with Zain?



### HOMEWORK / FOLLOW UP

Assign the questions from the textbook on page 69 as homework.

# SUBTRACTION USING MENTAL STRATEGIES



## STUDENT LEARNING OUTCOMES

Construct subtraction sentences from given number stories.

## INFORMATION FOR TEACHERS

Teachers should know:

- that number stories are a way to show that math is connected to real life.
- how to identify the correct information from a number story and make a subtraction sentence from it.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



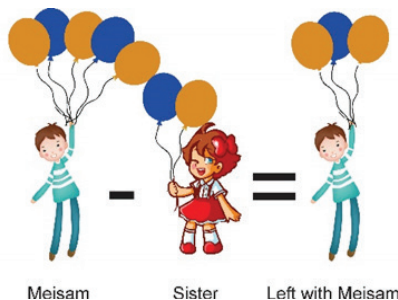
**MATERIALS / RESOURCES REQUIRED**

Board, Marker, Notebooks, Textbooks, Pencils, Chart



## INTRODUCTION

1. Write the following number story on the board.  
Hassan went to the market and purchased five balloons and gave 2 balloons to his sister.  
How many balloons are left with Hassan?
2. Ask students how do we solve this problem?
3. Give students a few minutes to discuss in pairs.
4. Take students' responses.
5. Tell students that to solve the question we must subtract 5 and 2.
6. Tell students that Hassan had 5 balloons and gives away 2 of them. Therefore, we subtract the numbers to find how many are left.
7. Tell students that when the numbers are written using the correct mathematical symbols it is called a "subtraction sentence" as shown below:  
 $5 - 2 = 3$
8. Draw and show students the following picture as well:





## DEVELOPMENT

### Activity 1

1. Write the following number stories or paste a chart on the board. The chart should be prepared before the lesson.
  - ♦ Abid has 18 marbles. He gives away 7 of them to Ahmed. How many marbles are left with Abid?
  - ♦ Hooria has 16 boxes of chocolates. She gives 10 boxes to her best friend. How many boxes are left with Hooria?
  - ♦ Saman has 12 sweets. She gives 7 sweets to her sister. How many sweets are left with Saman?
2. Ask students to work in pairs and write the subtraction sentences for each number story in their notebooks.
3. Ask students to come up to the board, write the subtraction sentences and answer the questions.
4. Encourage other students to also give their input.
5. Provide guidance where needed and share the correct subtraction sentences after ensuring student participation.



## CONCLUSION / SUM UP

1. Ask students what a number story is and how can we construct subtraction sentences from number stories.
2. Students should mention that number stories are a way to show that math is connected to real life.
3. Students should highlight that it is important to identify the correct information from a number story to make a subtraction sentence from it.



## ASSESSMENT

1. Ask students to write the subtraction sentence in their notebooks for the following number story.

Adnan brought 18 bananas and he ate 5 of them. How many bananas are left with Adnan?
2. After students have attempted the question share the correct subtraction sentence with the students.



## HOMEWORK / FOLLOW UP

Ask students to write subtraction sentences for all the number of stories written on pages 63 to 64.

**Month**

**5**

# COMPARISON OF HEIGHT AND LENGTH



## STUDENT LEARNING OUTCOMES

- Compare the heights/lengths of two or more objects using the following terms:
  - ◇ Long, Longer, Longest
  - ◇ Short, Shorter, Shortest
  - ◇ Tall, Taller, Tallest
  - ◇ High, Higher, Highest

## INFORMATION FOR TEACHERS

The teacher should know that:

1. Length is the distance between two points, and we can compare lengths by using terms like long, longer, longest or short, shorter, shortest.
2. Height is the perpendicular distance of an object from the earth, and we can compare heights by using terms like tall, taller, tallest and high, higher, highest.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils (of different sizes), Chalk, Charts, Candles of different heights.



## INTRODUCTION

1. Hold up two fingers on the left hand (Index finger and Middle finger). Students should also hold up these two fingers on their left hands. The Index finger is the finger closest to the thumb.
2. Ask the students which finger is longer. Tell students that the middle finger is longer.
3. Which finger is shorter? Let students answer that the index finger is shorter.
4. Tell the students that in today's lesson we will be comparing the lengths and heights of different objects.

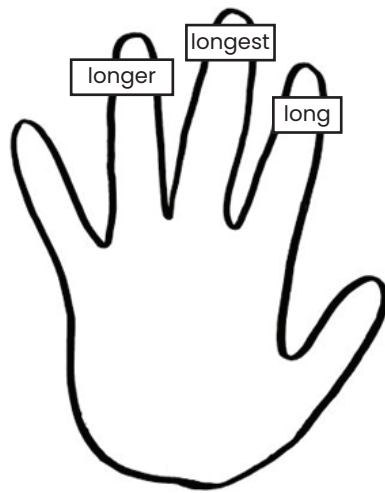


## DEVELOPMENT

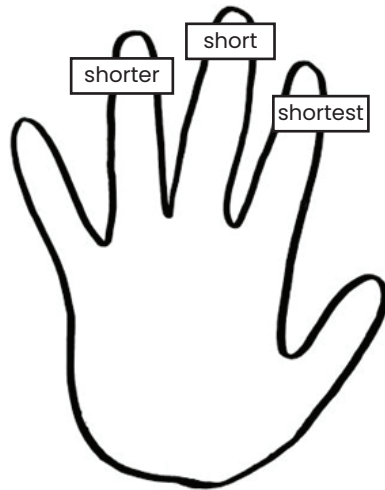
### Activity 1

1. Hold up 3 fingers (Index, Middle, and Ring finger) and ask students to use the words "long", "longer, and "longest" to describe the three. Give students a few minutes to discuss amongst themselves.
  - ◇ After a few minutes, draw the picture below





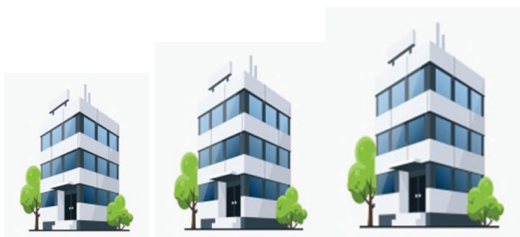
2. Using the same 3 fingers ask the students to use the words "short", "shorter", and "shortest" to describe the three. Give students a few minutes to discuss amongst themselves.
3. After a few minutes, draw the picture below



4. Divide the class into groups.
5. Distribute various objects like, sticks pencils, chalks, and scales to each group.
6. Tell them to arrange the objects lengthwise.
7. Ask the students which is longest, and which is shortest?

### Activity 2

1. Ask 3 students (with a visible height difference) to stand at the front of the class. Ask students to describe the students using the words "tall", "taller" and "tallest".
2. Guide students to arrive at the correct answers.
3. Show three candles of different heights to the students and ask them to identify which candle is "short", "shorter" and "shortest".
4. Paste the chart that has pictures of three buildings. See below:



5. Ask the students to identify the tallest building? Correct answer: The building on the right.

6. Paste the chart that has pictures of three mountains. See below:



7. Ask the students to identify the high mountain, the higher mountain, and the highest mountain? Let students discuss amongst themselves for a few minutes. Guide students to arrive at the correct answers.
8. Tell the students for buildings we use the words tall, taller and tallest and for mountains, we may use the words high, higher, and highest.



## CONCLUSION / SUM UP

1. Ask the students to explain how they can categorize different objects by their lengths and heights using:
- ◇ Long, Longer, Longest
  - ◇ Short, Shorter, Shortest
  - ◇ Tall, Taller, Tallest
  - ◇ High, Higher, Highest
2. Students should say that we can compare lengths by using terms like long, longer, longest, or short, shorter, shortest.
3. Students should also mention that height is the perpendicular distance of an object from the earth, and we can compare heights by using terms like tall, taller, tallest and high, higher, highest.



## ASSESSMENT

1. To assess the students, ask the following questions.
- ◇ What is the name of the tallest student in the class?
  - ◇ What is the name of the shortest student in the class?
  - ◇ Look at the height of the door and the window. Which one is higher?
  - ◇ Compare your ruler with your pencil? Which one is shorter?



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on pages 75 to 81.

# HEAVY, HEAVIER AND HEAVIEST AND LIGHT, LIGHTER AND LIGHTEST



## STUDENT LEARNING OUTCOMES

- Compare the masses of two or more objects using the terms:
  - ◊ Heavy, heavier, heaviest
  - ◊ Light, lighter, lightest

## INFORMATION FOR TEACHERS

The teacher should know that:

- The more the quantity of matter in an object the heavier it will be.
- We can compare masses of objects by using terms like heavy, heavier, heaviest or light, lighter, lightest.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils (of different sizes), Chalk, Charts, 1.5 liter Water Bottle, Tennis ball, Cricket Hardball, Leaves, Stones, Bricks.



## INTRODUCTION

1. Ask a student to volunteer to come to the front of the class.
2. Give this student the empty water bottle to hold.
3. Half-fill the bottle with water and give it to the student to hold again.
4. Now fill the bottle with water till the top and give it once again to the student to hold.
5. Now ask the students “when was the water bottle the lightest”? Let students answer: When it was empty.
6. Now ask the students “when was the water bottle the heaviest”? Let students answer: When it was full.
7. Tell students that in today’s lesson they will be comparing the mass of different objects by using the words “Heavy, heavier, heaviest” and “Light, lighter, lightest”.



## DEVELOPMENT

### Activity 1

1. Divide the students into groups of 3.
2. Place a tennis ball, a hard cricket ball, and a heavy brick on the teacher’s desk.
3. Tell each group to draw the three objects in their notebooks and write “Heavy, Heavier, Heaviest” under each picture. Write “Heavy” under the cricket ball to get the students

started. Students may come up to the teacher's desk and hold each object to get a sense of its weight.

4. Now place a book, a pencil and some leaves on the teacher's desk.
5. Tell each group to draw the three objects in their notebooks and write "Light, Lighter, Lightest" under each picture. Write "Light" under the book to get the students started. Students may come up to the teacher's desk and hold each object to get a sense of its weight.



### **CONCLUSION / SUM UP**

Ask the students to explain how they can categorize different objects by their masses using:

- Heavy, heavier, heaviest
- Light, lighter, lightest



### **ASSESSMENT**

Ask the following questions:

- Which is the lightest thing in your bag?
- Which is the heaviest thing in your bag?
- Which one is lighter, a hen or its egg?



### **HOMEWORK / FOLLOW UP**

Assign the relevant activities from the textbook on pages 82-83.

# PAKISTANI COINS AND NOTES



## STUDENT LEARNING OUTCOMES

- Identify Pakistani currency coins (Rs 1, 2, 5, and 10)
- Identify Pakistani currency notes (Rs 10, 20, 50, and 100)

## INFORMATION FOR TEACHERS

Teachers should know that:

- Money is in the form of notes and coins.
- Coins are made up of metal while notes are made of paper.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Writing board, Chalk/Marker, Currency coins of 1, 2, 5, and 10. Fake currency notes of Rs. 10, 20, 50, and 100.



## INTRODUCTION

Ask the students the following questions and record their responses:

1. What is meant by money? Answer: Money is used to buy different things.
2. How do we use it in real life? We can use it to buy things or services (like cleaning).
3. Where is money used? Answer: We can use it in the supermarket, restaurant or even pay people like the barber. We can use it to pay our bills.
4. What are the different types of money? Answer: In Pakistan, we have different coins and notes.



## DEVELOPMENT

### Activity 1

1. Divide the class into groups of 5.
2. Distribute currency coins of 1, 2, 5, and 10 Rupees to each group. Ensure that each group has a coin.
3. Tell the students to look at each coin and observe it closely.
4. Ask students to discuss in their groups:
  - ♦ What number is written on the coin?
  - ♦ What is made on it?
5. Each group should observe a coin for 3-4 minutes and then pass it on to the next group.

6. After students have discussed this in detail, ask them to the table below on the writing board. Guide the students through the activity. The complete table is for the reference of the teacher.

Coin	What is made on the coin
1 rupee	The Badshahi Mosque on one side and Quaid-e-Azam on the other
2 rupees	The crescent and a star on one side and the Badshahi Mosque on the other
5 rupees	The number 5 inside a shape and the crescent and a star on the other side
10 rupees	The crescent and a star on one side and the Faisal Mosque on the other

## Activity 2

- To the same groups, distribute the fake currency notes of Rs 10, 20, 50, and 100. Ensure that each group has a note.
- Tell the students to look at each currency note and observe it closely.
- Ask students to discuss in their groups
  - What number is written on the currency note?
  - What is made on it?
- Each group should observe a currency note for 3-4 minutes and then pass it on to the next group.
- After students have discussed in detail ask them to copy and complete the table below in their notebooks. The completed table is for the reference of the teacher.
- As a teacher, you can decide what level of detail you want to provide to the students.

Note	What is made on the coin
10 rupee	The Bab-e-Khyber Gate on one side and Quaid-e-Azam on the other
20 rupees	Mohenjo-Daro ruins on one side and Quaid-e-Azam on the other
50 rupees	The Karakoram Peaks on one side and Quaid-e-Azam on the other
100 rupees	The Quaid-e-Azam house in Quetta on one side and Quaid-e-Azam on the other.



## CONCLUSION / SUM UP

Conclude the activities by asking students to list some key features of Pakistani notes and coins.



## ASSESSMENT

To assess students, call them to the teacher's desk and ask the following questions:

- Place different currency coins on the table and ask the students to recognize Rs. 1 and Rs. 5 coins.
- Place different currency notes on the table and ask the students to recognize Rs. 10 and Rs. 100 currency notes.



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on pages 88 to 90.

# CHANGING MONEY



## STUDENT LEARNING OUTCOMES

- Match a group of coins/notes to an equivalent group of different denominations.

## INFORMATION FOR TEACHERS

The teacher should know about the Pakistani currency coins and notes, and the relation between coins and notes.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**






## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Writing board, Chalk/ Marker, Currency coins of 1, 2, 5, and 10, Fake currency notes of Rs. 10, 20, 50, and 100.



## INTRODUCTION

- Ask two students to come forward.
- Give two coins of Rs. 1 to one student and 1 coin of Rs. 2 to the other student.
- Ask the first student to show the 2 coins and count aloud. (The student should say 2)
- Ask the 2nd student to show the coin of Rs. 2 to the class.
- Now ask the students who has more money? Give students a few minutes to think and discuss amongst themselves.
- Tell the class that they are both equal as one coin of Rs. 2 has the same value as two coins of Rs. 1. See the image below:

Rs. 2	=	Rs. 1	+	Rs. 1
	=		+	

So, two coins of Rs. 1 are equivalent to one coin of Rs. 2.



## DEVELOPMENT

### Activity 1

- Ask two other students to come forward.

2. Give two coins of Rs. 5 to one student and 1 coin of Rs. 10 to the second student.
3. Ask the first student to show the two coins and count aloud. (The student should say 10)
4. Ask the second student to show the coin of Rs. 10
5. Now ask the students who has more money? Give students a few minutes to think and discuss amongst themselves.
6. Tell the class that they are both equal as two coins of Rs. 5 have the same value as one coin of Rs. 10. See the image below:

Rs. 5	+	Rs. 5	=	Rs. 10
	+		=	

8. Create consensus among the children that two coins of Rs. 5 make one coin of Rs. 10.

## Activity 2

1. On the your desk, one after the other, place A on one side and B on the other.
 

A – 2 coins of 5 rupees	B – One coin of 5 rupees
A – 4 coins of 2 rupees	B – One ten-rupee coin
A – 1 ten-rupee note	B – 2 coins of 5 rupees
A – 1 twenty-rupee note	B – 2 ten-rupee notes
2. Tell students to pick the side with more money.
3. Represent both sides with the currency coins/currency notes mentioned above so that students can recognize them.
4. Give students time to think and then guide them to the correct answers.
5. In A Side A has more money as  $5 + 5$  is more than 5
6. In B Side B has more money as 10 is more than  $2 + 2 + 2 + 2$  which makes 8
7. In C both Side A and Side B are equal as  $10 = 5 + 5$
8. In D both Side A and Side B are equal as  $20 = 10 + 10$



## CONCLUSION / SUM UP

Conclude the activity by involving the students in explaining that high-value notes can be exchanged with notes and coins of lower values for example one note of Rs. 20 is equivalent to two notes of Rs. 10. Similarly one note of Rs. 100 is equivalent to five notes of Rs. 20 and so on.



## ASSESSMENT

To assess the children, ask the following questions.

- How many coins of Rs. 1 are equivalent to two coins of Rs. 2?
- How many coins of Rs. 10 are equivalent to one note of Rs. 50?
- How many notes of Rs. 20 are equivalent to one note of Rs. 100?
- Guide students where needed before sharing the correct answers.



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on pages 91-94.



# ADDING AND SUBTRACTING PRICE



## STUDENT LEARNING OUTCOMES

Add and subtract money using the prices of objects (transactions) (e.g., toys)

## INFORMATION FOR TEACHERS

The teacher should know that money is used for shopping in our daily life, and we have to add or subtract money to buy different things and calculate the change.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Writing board, Chalk/Marker, Currency coins of 1, 2, 5, and 10, Fake currency notes of Rs. 10, 20, 50 and 100, Chips Packet, Chocolate packet with price mentioned.



## INTRODUCTION

1. Ask the children if they have any experience of shopping with their parents/family members.
2. Why do you go to the bazaar/market?
3. What do you normally buy? How much money does that cost?
4. When do you know you have enough money to buy something?



## DEVELOPMENT



### Activity 1

1. Place a book on the table with a price tag of Rs. 30 on it.
2. Tell students that they will need Rs. 30 to buy the book.
3. Give Rs. 20 note to one student and ask the class how much money does the student has?
4. The class should say that the student has Rs. 20.
5. Ask the student "Can you buy the book?" (Answer: No)
6. Now give the same student an additional Rs. 20 and ask once again, "Can you buy the book?" (Answer: Yes)
7. Ask the students how he/she knows that they can now buy the book? Give the students a few minutes to think and discuss.
8. Guide students to the correct answer: As the price of the book is Rs. 30 and the student now has Rs.40, he can buy the book.
9. Ask the student to pay you the money and take the book.

10. Ask the class "has the shopping finished?" Let students think and discuss amongst themselves.
11. Ask the children if we pay more than the price of an object then should we get the rest of the amount back? This amount is called "change".
12. Ask the whole class how much money you should give back to the student who has just bought the book? Let students think and discuss amongst each other.
13. Students may count up from 30 to 40 and conclude that you have to give back Rs. 10. ( $40 - 30 = 10$ )
14. Repeat this activity for other items and amounts with different students.

## Activity 2

1. Tell students to complete the question in their notebooks.
2. Hania buys one packet of Chips for Rs. 30 and one chocolate for Rs. 20. How much money does she spend?
3. Guide students to set up the question as follows:

Cost of Chips	=	Rs. 30	
Cost of chocolate	=	+ Rs. 20	
Total cost	=	Rs. 50	

4. Hania spends a total of Rs. 50








## CONCLUSION / SUM UP

Conclude the activity by involving the children in explaining adding and subtracting prices and calculating change. Students should give the example of the purchase of different things that they like and then calculate the change as well.



## ASSESSMENT

1. Prepare a chart and paste it on the board.
2. Assess the children by asking the given questions.
3. Add the values of coins and notes:

	+		+	
			+	

Hania has Rs. 70. She wants to buy toys worth Rs. 85. How much more money does she need?

4. Provide students guidance where needed.



### **HOMEWORK / FOLLOW UP**

Assign the relevant activities from the textbook on pages 94–98.

# ADDING AND SUBTRACTING PRICE



## STUDENT LEARNING OUTCOMES

- Recognize money change (up to 100) to its equivalents/denominations.
- Determine if enough money is available to make a purchase (up to 100).
- Add different combinations of coins/notes (to make sum up to 100).

## INFORMATION FOR TEACHERS

Teacher should:

- Know that money is used for buying things in daily life.
- Be able to add and subtract money to determine if there is enough money to buy something.
- Be able to calculate change.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Currency coins of 1, 2, 5, and 10, Fake currency notes of Rs. 10, 20, 50, and 100.



## INTRODUCTION

1. Show the students different currency coins/notes and ask if students recognize them.
2. Ask what are the notes and coins used for? Let students think and recall. Tell the children that we use these for shopping/buying of items etc.
3. Tell the students that in today's lesson we will discuss the addition and subtraction of money to determine if they can buy something and to calculate change.



## DEVELOPMENT

### Activity 1

1. Invite students to come closer to your table.
2. Place a Rs. 50 note on one side of the table and ask students if they can identify it.
3. On the other side of the table place Rs. 50 but in coins i.e. (two coins of Rs. 5, two notes of Rs 10, and one note of Rs. 20). The two sides of the table, the notes and coins, should be visible to all students. Draw an illustration on the board if some students cannot see it.
4. Ask the students which side of the table has more money?
5. Let the students think. Encourage them to add the money so that they can see that the amounts on both sides of the table are equal.

6. Now place six notes of Rs. 10 on one side of the table and three notes of Rs. 20 on the other side of the table. Again, ask the students which side of the table has more money?
7. Let the students think. Encourage them to add the money so that they can see that the amounts on both sides of the table are equal.
8. Repeat the exercise with several other denominations.

## Activity 2

1. Anaya has two coins of Rs. 5 and one coin of Rs. 2.  
She went to a book shop and saw an interesting storybook. She wanted to buy it, so she asked the shopkeeper its price. The shopkeeper said its price is Rs.25. Can Anaya buy that book with the money she has?
2. Ask the students to discuss in pairs.
3. After taking their responses ask them why she cannot buy the book?
4. How much more money does she need to buy the book? How much money does she have? How much more does she need?
5. Set up similar questions like the one mentioned above and ask the students whether the money is sufficient to buy the object.

### Activity 3

1. Divide the class into pairs.
2. Tell students to make up Rs. 20 in as many ways as possible, using both coins and notes.
3. Note for teacher: There are many ways to make Rs. 20
  - ◇ Rs. 20 note ◇ 2 Ten rupee notes
  - ◇ 2 Ten rupee coins ◇ Four 5 rupee coins Etc.
4. Encourage all pairs to participate in this activity.
5. Provide guidance where needed.



## CONCLUSION / SUM UP

Conclude the activity by discussing why we need currency coins and currency notes. What is their role in our daily lives? Also ask the students to discuss how we know we have enough money to buy something and how to find change after we buy something.



## ASSESSMENT

1. Tell students that after Eid a student has Rs. 100 and goes shopping for items like toys, sweets, chocolates etc.
2. Assign a price to each item.
3. Ask students to determine if they have enough money to buy the things they want.
4. Ask students to determine what their change should be after the purchase.
5. Take up the role of a shopkeeper to engage students.



## HOMework / Follow Up

Assign the relevant activities from the textbook on pages 99–100.

**Month**

6

# CLOCK



## STUDENT LEARNING OUTCOMES

Recognize the hour and minute hands on an analog clock.

## INFORMATION FOR TEACHERS

- Teachers should know that an analog clock typically has 3 hands, an hour hand, a second hand, and a minute hand.
- The teacher should know which hand is the hour hand, which hand is the minute hand, and which hand is the second hand on an analog clock.



## DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Analog clock.



## INTRODUCTION

- To develop students' interest in the topic, ask the following questions:
  - When did you wake up in the morning?
  - What time did you come to the school?
  - What is the school closing time?
  - What time is it right now?
- Tell students that to find out what time it is, we must look at an analog clock and know what the pointers on an analog clock indicate. The pointers are called the hands (say this word out loud). In today's lesson, we will learn about the hands of the analog clock.

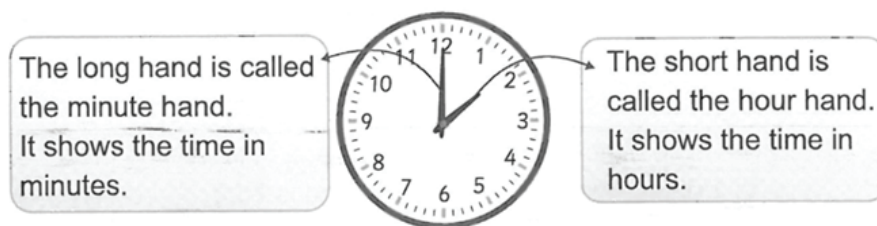


## DEVELOPMENT

### Activity 1

- Display an analog clock in the class and ask students what they know about it. If an actual analog clock is not available then a picture of an analog clock may also be used.  
**Important Note:** Use an analog clock with only two hands, the hour hand and the minute hand. Seconds are introduced to students in later grades.
- Ask students the following questions:
  - How do we use an analog clock? Ans: We tell the time.
  - How many numbers are there on the clock? Ans: 12
  - How many needles called hands do you see on the clock? Ans: 2
  - Now ask the students what do these hands indicate?

- Let the students discuss amongst each other for a few minutes and then guide students to the correct answers.
- For iv, tell the students that the long hand is called the minute hand. It shows the time in minutes.
- Tell the students that the short hand is called the hour hand and it shows the time in hours. Show students the image on page 102. See below



- Tell the students that if the short hand or the hour hand is on the number 2 and the long hand or the minute hand is on the number 12 then the time will be 2 o'clock.
- Explain to students the process of reading an analog clock. Since the hour hand is on 2, we can say that it is 2 hours and some minutes. How many minutes? Let's look at the long hand or the minute hand.
- When the minute hand is at 12, it indicates that no minutes have passed after the hour. That it is exactly, 2 o'clock.
- Now move the hands (long and short) to different times and ask students what time it is. Ensure that the minute hand stays on 12 for every example.

## Activity 2

- Ask students to draw and label an analog clock in their notebooks.
- Walk through the class and guide students on the type of hands on an analog clock.



## CONCLUSION / SUM UP

- Ask students to state the key takeaway from the lesson i.e. there are two hands on an analog clock, the long hand shows the minutes and the short hand shows the hours.
- Furthermore, there are 12 digits on an analog clock.



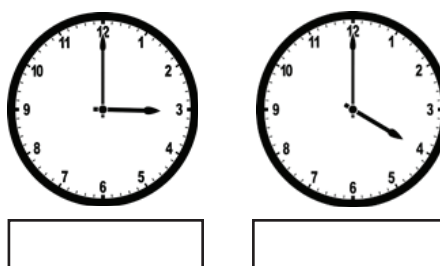
## ASSESSMENT

Adjust the hour and minute hands of a clock and ask each student to tell the time on an analog clock. Once again, ensure that the minute hand is pointing at 12.



## HOMEWORK / FOLLOW UP

Draw an analog clock on the board as shown below and ask the students to copy them in their notebooks. Tell them to write the correct time in the space provided.





## CLOCK



## STUDENT LEARNING OUTCOMES

- Read and tell time in hours from the analog clock for example 2 o'clock.
- Read and tell time in hours from the digital clock.

## INFORMATION FOR TEACHERS

Teachers should know that:

- an analog clock, through the movement of hands, shows the time.
- for grade 1, an analog clock expresses time with the help of 2 hands (minute hand and hour hand)
- a digital clock shows the time numerically (i.e., in digits).



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Analog clock, Digital Clock or Chart containing images of analog and digital clocks, Flashcards.



## INTRODUCTION



1. Ask the following questions:
  - ♦ What do you call this? (Pointing to the analog clock on the wall)
  - ♦ How can you tell time using an analog clock?
  - ♦ Is there any other way to tell the time?
  - ♦ How can you tell time using a digital clock?
2. Let students discuss amongst each other and then tell the students that today they will learn how to tell the time on an analog (a clock with pointers/hands) and a digital (a clock with digits) clock.



## DEVELOPMENT

## Activity 1

1. Display the chart containing the images of an analog and a digital clock.

	
Analog Clock	Digital clock

2. Ask students what time is it on the analog clock?
3. Let students discuss amongst each other for a few minutes and then tell them that the shorthand is called the hour hand and it shows the time in hours. The long hand or the minute hand shows the time in minutes. Show students the image on page 102. See below



4. For the analog clock on page 102, tell the students that if the shorthand or the hour hand is on the number 2 and the long hand or the minute hand is on the number 12 then the time will be 2 o'clock.
5. Once again ask students what time is shown on the analog clock on the chart?
6. Guide students to the correct answer of 3 o'clock.
7. Ask students what time is it on the digital clock? Some students may be able to guess that it is 10 o'clock.
8. Provide clarity on how to tell time using the digital clock
9. Tell students that the: separates the hours on the left side from the minutes on the right side. The time in the picture shown below is 7 o'clock.



## Activity 2

1. Draw some analog and digital clocks on the board and ask students to raise their hands to tell the time.
2. Other students may provide guidance and feedback.  
What time is it on these Analog Clocks?
3. What time is it on these Digital Clocks?

03:00	05:00	8:00

## Activity 3


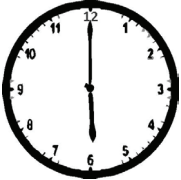



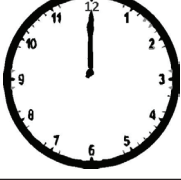
1. Make two groups of students, having five students in each group.
2. Group 1 will be given flashcards on which time is represented on analog clocks.
3. Group 2 will be given flashcards at which the same time is represented on digital clocks.
4. Ask students from Group 1 to show the time on one flashcard and ask the students from

the Group 2 to show the flashcard with the same time in digital form.

- Both the students (from Group 1 and 2) with the same time on their clocks, will stand together at the front of the class.
- In the next round ask Group 2 to show the time on one flashcard and ask the students from the Group 1 to show the flashcard with the same time in analog form.
- Repeat this activity with different students and different flashcards.

#### Activity 4

- Paste the following chart on the board and ask students, one by one, to come to the board.
- On the chart, match the time shown on the analog clock with the correct time shown on the digital clock. Guide students if needed.

Analog Clock	Digital Clock
	9:00
	3:00
	11:00
	6:00
	12:00
	8:00



#### CONCLUSION / SUM UP

Guide student discussion so that the key takeaways from the lesson are:

- A clock is used to indicate time.

2. There are two types of clocks: analog clock and a digital clock
3. Time is represented by 2 hands in an analog clock: hour hand and minute hand.
4. In a digital clock, time is represented in digits.



### ASSESSMENT

Ask students:

1. In an analog clock which hand indicates hours?
2. How do we tell the time on an analog clock?
3. How do we tell time on a digital clock?
4. How is the **:** used in a digital clock? What is it used to separate?



### HOMEWORK / FOLLOW UP

1. Assign the relevant activities from the textbook on pages 104-105.
2. By drawing the clocks in your notebooks, show the following times on analog and digital clocks:
  - ◇ 10 o'clock
  - ◇ 5 o'clock
  - ◇ 8 o'clock,
  - ◇ 3 o'clock
  - ◇ 11 o'clock

# DAYS OF THE WEEK



## STUDENT LEARNING OUTCOMES

- Name in order days of the week.
- Identify which day comes after/before a particular day.

## INFORMATION FOR TEACHERS

The teacher should:

- know the different days of the week.
- be able to tell which day comes before and after a given day.



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Flashcards, Calendar.



## INTRODUCTION

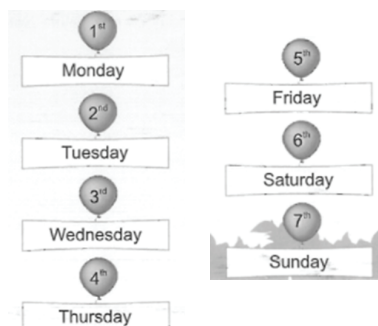
1. Show a calendar to the class and ask a few students to point out their birthday on the calendar. Take student responses and say out loud the day on which the birthday falls e.g., "Ali's birthday is on the 6th of September which will be a Monday".
2. Then ask the students to mention the day on which the school is off. Some students should know that Sunday is the day that school is off.
3. On which days do you come to the school? Guide students to say the names of days of the week.
4. On which day do we have the Jumma prayer? Tell students that Jumma is on Friday.



## DEVELOPMENT

### Activity 1








1. Write the names of the days of the week on the board. See page 106.



- Students will read loudly in sequence starting from Monday.
- The students will also read turn wise i.e., 1st student will say "Monday", the 2nd will say "Tuesday" and so on until all students have had a turn.

### Activity 2

- Select seven students from the class and give them, at random, a flashcard with the name of a day written on it.
- Tell the students to sort themselves by day, starting from Monday, and clearly display the card that has the name of their day on it.
- The rest of the students should guide these students so that they are standing, left to right, starting from Monday and ending on Sunday. See below:

						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3	4	5	6	7

- Instruct the first student to say "I am the first day of the week. My name is Monday".
- The second student will say "I am the second day of the week. My name is Tuesday".
- Ask the rest of the students to come forward and continue the activity in the same way.
- The same activity may be repeated in groups of 7 so that students learn the names of the days and their sequence.

### Activity 3

- Divide the class into small groups and distribute flashcards to the groups on which the name of the days are written.
- Direct the groups to keep the cards in sequence as shown below:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
--------	---------	-----------	----------	--------	----------	--------

- Ask the following questions:
  - What day comes after Monday?
  - What day comes before Tuesday?
  - What day comes after Friday?
  - What day comes after Wednesday?
  - What day comes after Sunday? Tell students that after Sunday we start again with Monday.



## CONCLUSION / SUM UP

To revise the key points of the lesson, ask the following questions:

- How many days are there in a week?
- Name the days of the week in sequence starting with Monday.
- What is the name of the day that comes after Saturday?
- What is the name of your favorite day and what comes after that day?
- Name the day that comes before Friday?



## ASSESSMENT

1. Make a chart and write the names of the days of the week.
2. Ask students, what are the different days of the week.
3. Ask students, which day comes before and after a given day, for example, Tuesday comes after Monday but before Wednesday.
4. Guide students if needed.



## HOMEWORK / FOLLOW UP

1. Assign the relevant activities from the textbook on page 107.
2. Make the following handout and distribute it to students.
3. Ask the students to complete the table on the handout as homework.

	The day before...	The day after...
1.	Friday	Saturday
2.	Sunday	
3.		Tuesday
4.	Thursday	
5.		Wednesday

# SOLAR MONTHS AND ISLAMIC MONTHS



## STUDENT LEARNING OUTCOMES

- Name (orally) the solar months of the year.
- Name (orally) the Islamic months of the year.

## INFORMATION FOR TEACHERS

Teachers should know that:

- there are 12 solar and lunar months in a year.
- the earth completes one revolution around the sun in approximately 365.25 days. This amount of time is known as one solar year.
- there are twelve full moons in the year and the Islamic months are based on the moon.



## DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Flashcards, Calendar with both Solar and Islamic months mentioned on it.



## INTRODUCTION

1. Ask the students about important dates during the year.
2. Let students raise their hands and talk about the different important dates in their lives such as birthdays and other holidays.
3. During the discussion emphasize that:
  - ♦ In February we celebrate Kashmir day (5th February)
  - ♦ In March we celebrate Pakistan day (23rd March)
  - ♦ In August we celebrate our Independence Day (14th August)
  - ♦ Quaid-e-Azam was born in December (25th December)
  - ♦ Similarly, Muslims start fasting on the 1st of Ramzan
  - ♦ The Holy Prophet (ﷺ) was born on the 12th of Rabi-ul-Awal.
  - ♦ Hajj starts on the 8th of Zilhajj



## DEVELOPMENT

### Activity 1

1. Display the chart on the board and sing this poem.



January, February, and March

Sat waiting under an arch.

April, May, and June

Take their lunch at noon.

July, August, and September

I wish I could remember.

October, November, and December

2. Ask about the names of the months used in this poem.
3. Ask students to learn the poem by heart so that the students can learn the name of all the months in the solar calendar.

### Activity 2

1. Show the following chart which has the names of all the Islamic months. Revise the names of the months to help students memorize them.

1. Muharram	2. Safar
3. Rabi-ul- Awal	4. Rabiulsani
5. Jamadi-ul-Awwal	6. Jamad-ul-Sani
7. Rajab	8. Shaaban
9. Ramazan	10. Shawal
11. Zi'qad	12. Zil Hajj

### Activity 3

1. Display a chart on which the names of both the solar and the Islamic months are written and numbered.
2. Read the name of the months with the students.
3. Ask students questions like:
  - ♦ What is the 3rd month in the solar calendar?
  - ♦ What is the 7th month in the Islamic calendar?
  - ♦ What is the 1st month in both the Islamic and the solar calendar?
  - ♦ What is the last month in both the Islamic and the solar calendar?
4. Repeat this activity with other questions allowing all students to read the name of both the solar and the Islamic months of the year.

### Activity 4

1. Divide the students into 2 groups, then:
2. Distribute the flashcards to one group on which names of months are written.
3. Distribute the flashcards to the second group on which numbers 1-12 are written.
4. Ask the students to match the name of the month with the correct numbering. e.g., 1 matches with January.
5. Repeat the activity with the Islamic Calendar.



## CONCLUSION / SUM UP

Ask students:

1. How many solar months are there in a year? (Ans: 12)
2. Name the months of the solar year. Students should take turns saying each name. (Ans: Jan to Dec)
3. How many Islamic months are there? (Ans: 12)
4. What are the names of the Islamic months? Students should take turns saying each name (Ans: Muharram to Zil Hajj)



## ASSESSMENT

Ask the following questions:

1. Name 1st three months of the solar year and the Islamic year.
2. Name two months of the summer season in the solar calendar.
3. Name two months of the winter season in the solar calendar.
4. Which is the last month of the year in the solar calendar?
5. Which is the last month of the year in the Islamic calendar?
6. Which month comes before July?



## HOMEWORK / FOLLOW UP

1. From the textbook, copy the names of the months of the solar and the Islamic calendar in your notebooks.
2. Assign the relevant activities from the textbook on page 113.

# 2-D SHAPES



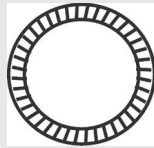
## STUDENT LEARNING OUTCOMES

- Recognize and identify shapes of similar objects in daily life.
- Identify the following basic shapes
  - ◊ Rectangle
  - ◊ Square
  - ◊ Circle
  - ◊ Triangle
- Match similar basic shapes in daily life.

## INFORMATION FOR TEACHERS

Teachers should know:

- two objects which have the same shape are called similar objects.
- similar objects, may or may not have the same size. For example,



- is similar to because their shapes are the same, even though their sizes are different.



**DURATION / NO OF PERIODS: 70 MINUTES / 2 PERIODS**



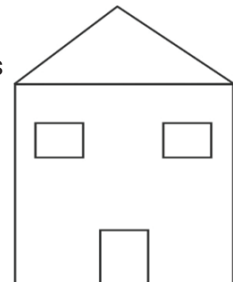
**MATERIALS / RESOURCES REQUIRED**

Board, Marker, Notebooks, Pencils, Textbook, Charts, Cardboard cut-outs of Circle, Rectangle, Square, and Triangle.



## INTRODUCTION

1. Ask students to look at the writing board and describe its shape.
2. Draw a picture of a football on the board and ask students to describe its shape.
3. Draw a picture of the house, shown on the right, and ask students if they recognize any of the shapes.
4. Take student responses and record them on the board.
5. Tell the students that many objects around us have specific shapes e.g., a television is shaped like a rectangle, a wall clock is shaped like a circle, a ludo board is like a square, a slice of cake looks like a triangle, etc.
6. Tell students that in today's lesson they will learn about different shapes.

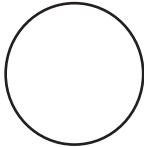


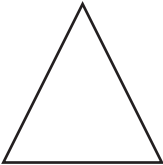




## DEVELOPMENT

### Activity 1

1. Call four students to the front of the class.
2. Give one cardboard piece to each student which represents the different shapes (see table below).
3. Each student should hold up their shape and then read the following from page 116. Help with the reading.

STUDENT 1: Circle	STUDENT 2: Square
<p>Circle circle is my name Round and round, never stop again Look at the wheel, it looks like me</p> 	<p>Square square is my name My 4 sides are the same Look at the carom, it looks like me</p> 
STUDENT 3: Rectangle	STUDENT 4: Triangle
<p>Rectangle rectangle is my name My 4 sides are not the same Look at the door, it looks like me</p> 	<p>Triangle triangle is my name Look at me, look at me Count my sides one, two, tree Look at the snack, it looks like me</p> 

4. Tell students what a side and corner are, using the square as an example.
5. Ask students to work in pairs and make observations about the shapes. The students should count the sides and corners.
6. After student discussion has taken place tell the class that:  
Shape 1 is a circle; it has no corner.  
Shape 2 is a square, it has four corners, all its sides are equal.  
Shape 3 is a rectangle, it has four corners, all its sides are not equal, only opposite sides are equal.  
Shape 4 is a triangle; it has three corners and three sides.
7. The students should record this information in their notebooks.



## CONCLUSION / SUM UP

Ask different students to come to the front of the class to list the properties of different shapes.

- Students should mention that a circle has no corner.
- A square has four corners, and all its sides are equal.
- A rectangle has four corners, and its sides are not equal, only opposite sides are equal.
- A triangle has three corners and three sides.

## 2-D SHAPES



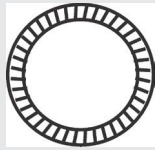
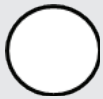
## STUDENT LEARNING OUTCOMES

- Recognize and identify shapes of similar objects in daily life.
- Identify the following basic shapes
  - ◊ Rectangle
  - ◊ Square
  - ◊ Circle
  - ◊ Triangle
- Match similar basic shapes in daily life.

## INFORMATION FOR TEACHERS

Teachers should know:

- two objects which have the same shape are called similar objects.
- similar objects, may or may not have the same size. For example,



- is similar to because their shapes are the same, even though their sizes are different.



## INTRODUCTION

- Ask the students to spot some shapes in the classroom which are similar to the shapes they have just learned about.
- They should be able to identify rectangles and squares (doors and windows), circles (sharpener's pencil hole), triangles (geometry box ruler) in the classroom. Allow all students to participate.



## DEVELOPMENT

## Activity 2

1. Draw the following table on the writing board and ask the students to come up to the board and complete it. Provide guidance where needed.

#	Object	Shape
1	Writing board	Rectangle
2	Shirt Buttons	
3	Sun	
4	Wall Clock	
5	Pages of Book	

6	Set Square (Triangular Ruler) in Geometry Box	
7	Ring	
8	Biscuits	
9	Ludo Board	



## CONCLUSION / SUM UP

Guide student discussion so that students agree that:

- Every object has a shape
- Round-shaped objects like a football are like circles.
- The Hangers and pieces of the cake look like triangles.
- The Carrom and ludo board looks like a square.
- The LCD TV looks like a rectangle.



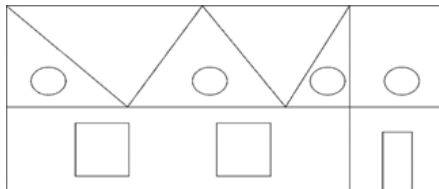
## ASSESSMENT

Ask students the following:

- Our classroom door is shaped like a \_\_\_\_\_
- Our school going is shaped like a \_\_\_\_\_
- Board of ludo is shaped like a \_\_\_\_\_
- Samosa's shape is like a \_\_\_\_\_

Note: This is an optional assessment for advanced students:

- Draw the figure on the board.
- Look at the picture carefully and answer the questions below:



- ♦ How many circles are there? \_\_\_\_\_
- ♦ How many squares are there? \_\_\_\_\_
- ♦ How many rectangles are there? \_\_\_\_\_
- ♦ How many triangles are there? \_\_\_\_\_



## HOMEWORK / FOLLOW UP

1. Assign the relevant questions from the textbook on pages 117-120.
2. Ask students to observe objects in their homes and make a list of things that are similar to circle, triangle, square, and rectangle. Use the table below:

Object	Shape
Cooking Pan	Circle

**Month**

**7**

# 2-D SHAPES



## STUDENT LEARNING OUTCOMES

- Distinguish basic shapes by considering their attributes (sides).
- Classify 2-D shapes according to the number of sides and corners.

## INFORMATION FOR TEACHERS

Teachers should know the basic shapes of geometry (circles, squares, rectangles, and triangles) and their properties (number of corners and sides).



## DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Charts, Flashcards or Cardboard cut-outs of Circle, Rectangle, Square and Triangle



## INTRODUCTION

1. Ask students to give examples of circles, squares, rectangles, and triangles from daily life.
2. Let students discuss and volunteer. Give the examples to students:
  - ♦ Wall clocks and pizzas are like circles.
  - ♦ Some windows, the ludo game, and the face of dice are all like squares.
  - ♦ Pencil boxes and TVs are like rectangles.
  - ♦ Road signs and hangers are like triangles.
3. Now draw a square on the writing board and ask students the following questions:
  - ♦ What is a side? (Ask students to point out the side of the square)
  - ♦ What is a corner? (Ask students to point out the corner of the square)
  - ♦ How many corners does a square have? (Ans: 4)
  - ♦ How many sides does a square have? Are they equal? (Ans: 4 and yes)



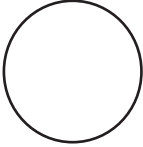
## DEVELOPMENT

### Activity 1

1. Divide students into groups of 4.
2. Distribute flashcards of 4 different shapes to each group. Ensure that each group has a circle, triangle, square, and rectangle.
3. The shapes can be of different sizes.



4. Tell each group to complete the following table in their notebooks. The first one has been done for them.
5. Give students a few minutes to discuss and complete.

Shape Name	Picture	Number of Sides	Number of Corners
Circle		0	0

6. After students have completed the activity, you should summarize:
  - ◊ Squares have four corners and four equal sides.
  - ◊ Rectangles have four corners and four sides, but opposite sides are equal.
  - ◊ Triangles have three corners and three sides. These sides may or may not be equal.
  - ◊ Circles have no corners and no sides.



## CONCLUSION / SUM UP

1. Guide student discussion so that students agree that:
  - ◊ Every object has a shape.
  - ◊ Round-shaped objects like balls are like circles. Circles have no sides or corners.
  - ◊ Triangles have three corners and three sides. Some hangers and road signs are like triangles.
  - ◊ A square has 4 corners and 4 sides. All sides of a square are equal. The Carom board looks like a square.
  - ◊ A rectangle also has 4 corners and sides. The opposite sides of a rectangle are equal. The TV looks like a rectangle.



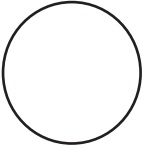
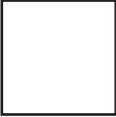


## ASSESSMENT

Draw a few pictures of circles, squares, rectangles, and triangles on the writing board and ask students to distinguish among these shapes and to list their attributes.



## HOMEWORK / FOLLOW UP

Revise the completed table from Activity 1.

Shape Name	Picture	Number of Sides Are the sides equal?	Number of Corners
Circle		0	0
Square		4 Are the sides equal? Yes	4
Rectangle		4 Are the sides equal? Opposite sides are equal	4
Triangle		3 Are the sides equal? They may or may not be equal.	3

# PATTERNS



## STUDENT LEARNING OUTCOMES

- Identify the next shape in the patterns with 2 or 3 elements.
- Extend a given pattern of 2 or 3 elements.

## INFORMATION FOR TEACHERS

Teachers should know:

- how to design a pattern with different objects.
- how to identify and draw the next object(s) in a pattern.
- how to organize the objects given in a pattern(s).



**DURATION / NO OF PERIODS: 35 MINUTES / 1 PERIOD**



## MATERIALS / RESOURCES REQUIRED

Board, Marker, Notebooks, Pencils, Textbook, Charts, Cardboard cut-outs of Moon, Pictures of flower and parrot, Stars, Circles, Rectangles, Squares, and Triangles.



## INTRODUCTION

1. Paste the pictures of the flowers and parrots on the writing board as shown below.



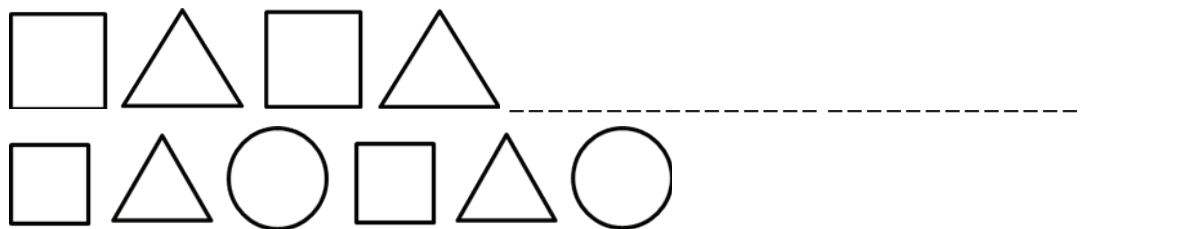
2. Ask the students what can they observe?
3. Let students discuss amongst each other for a few minutes.
4. Tell students that the images on the board follow a pattern i.e. flower, bird, flower, bird, flower...
5. Ask students if they can guess what will come next in the pattern? Let students raise their hands and answer. Guide them to the correct answer "bird".
6. Tell students that in the pattern above, the bird comes after every flower and the flower comes after every bird.
7. Tell students that in today's lesson we will talk about patterns and predict the next shape in a given pattern.



## DEVELOPMENT

### Activity 1

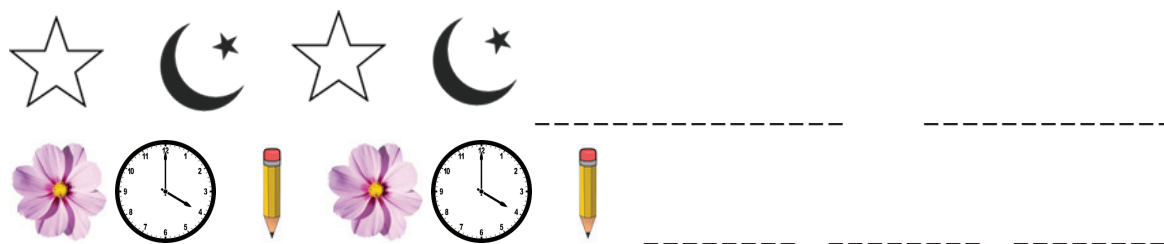
1. Paste the pattern of the basic shapes on the writing board.
2. Ask students to make the next shape(s) and complete the pattern in their notebooks:



3. A good strategy to extend the pattern above is to say out loud, "square, triangle, circle, square, triangle circle..." That way, the student will know that the next 3 shapes to draw are "square, triangle, circle".
4. Guide students to enter the correct shapes to complete the patterns in their notebooks.

### Activity 2

1. Draw the pattern of different images and ask the children to complete it in their notebooks.



2. A good strategy to extend the pattern is to say out loud, "flower, clock, pencil, flower, clock, pencil..." That way, the student will know that the next 3 pictures to draw are "flower, clock, pencil".
3. Guide students to enter the correct shapes to complete the patterns.



## CONCLUSION / SUM UP

1. Ask students how can we identify the next shape in a pattern and extend the pattern of different objects/shapes.
2. Students should highlight the importance of observing the pattern closely and outline the strategy of saying aloud something about the shapes/images in the pattern to identify and draw the next shape.



## ASSESSMENT

1. Provide 3 pictures of each object to the students e.g. Moon, Star, Circle, Rectangle, Square, and Triangle, etc.
2. Ask some of the children to make a pattern from these pictures on the board.
3. Ask some other children to extend the pattern on the board.
4. Provide guidance where needed.



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on pages 121 to 123.

# POSITION



## STUDENT LEARNING OUTCOMES

- Identify whether an object is placed
  - ◇ Inside or outside
  - ◇ Above or below
  - ◇ Over or under
  - ◇ Far or near
  - ◇ Before or after a given object

## INFORMATION FOR TEACHERS

The teacher should be able to tell the position of an object in all instances mentioned in the SLO i.e., the teacher should know the meanings and contextual usage of each word.



**DURATION / NO OF PERIODS: 70 MINUTES / 2 PERIODS**



## MATERIALS / RESOURCES REQUIRED

- Board, Marker, Notebooks, Pencils, Textbook, Charts, Flashcards



## INTRODUCTION



1. To engage the students with the topic, ask the following questions:
  - ◇ Name two objects which are outside the classroom? (Tree and swing)
  - ◇ Name two objects which are inside the classroom? (Book and table)
  - ◇ Name something that is above you? (Fan and ceiling)
  - ◇ Name something that is below you? (Floor and ground)
2. Make clear the meaning of each word with every example.
3. Tell students that in today's lesson we will learn about the "position of objects".



## DEVELOPMENT

### Activity 1

1. Draw a box on the writing board and also draw a ball beside the box.
2. Now draw another box showing a ball inside.

Box 2	Box 1
	

3. Ask students where is the ball in box 1?
4. Students should respond "outside the box 1".
5. Now ask students, where is the ball in box 2?
6. Students should respond "inside the box".
7. Now ask students to open page 138 of the Mathematics Grade 1 textbook and look at the pictures given for 'Inside and Outside' activity.
8. Complete the textbook activity and explain the concept of 'Inside and Outside' through this activity of the textbook

### Activity 2

1. Follow the same methodology outlined in 'Activity 1' of this lesson.,
2. Complete the activity given on page 139 of the Mathematics Grade 1 textbook for 'Above and Below' concepts.



### CONCLUSION / SUM UP

1. Ask the students to give examples of objects that are inside and outside.
2. Ask the students to give examples of objects that are above and objects that are below.
3. Guide students where needed.

# POSITION



## INTRODUCTION

- To engage the students with the topic, ask the following questions:
  - ◇ Name two objects which are outside the classroom? (Tree and swing)
  - ◇ Name two objects which are inside the classroom? (Book and table)
  - ◇ Name something that is above you? (Fan and ceiling)
  - ◇ Name something that is below you? (Floor and ground)
- Make clear the meaning of each word with every example.
- Tell students that in today's lesson we will learn about the "position of objects".

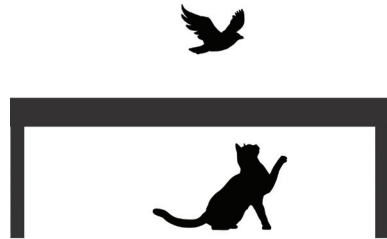


## DEVELOPMENT

### Activity 3

(This activity is for over and under)

- Display the chart with the picture below and explain the concept of over and under.



- ◇ The bird is over the table.
  - ◇ The bird is over the cat.
  - ◇ The table is over the cat.
  - ◇ The table is under the bird.
  - ◇ The cat is under the table.
  - ◇ The cat is under the bird.
- Paste the picture shown below on the writing board.
  - Ask the students to tell the position (over and under) of the objects (car, road) in the picture shown.



#### Activity 4

(This activity is for far and near)

1. Ask two students from two different rows to stand up. Ensure that one student is in the 1st row and the 2nd student is in the last row.
2. Ask the other students to tell which student is near the board and which is far from the board.
3. Now ask the students to think of five objects which are near the classroom door and 5 objects that are far from the classroom door.
4. Draw the picture on the board and ask students which student is near the car, and which is far from the car?



Zain



Usman

#### Activity 5

(This activity is for before and after)

1. Tell students that in a race between a car, a jeep, and a bus the result was:
  - ♦ The jeep was the fastest and came 1st
  - ♦ The car came in 2nd
  - ♦ The bus was the slowest and came in 3rd.
2. Ask students to answer the following questions:
  - ♦ Who finished the race after the jeep?
  - ♦ Who finished the race before the bus?
  - ♦ Who finished the race after the car?



#### CONCLUSION / SUM UP

1. Ask students how the position of an object can be described. Ask students to give examples.
2. Students should mention that objects can be compared by using the following words:
  - ♦ Inside, Outside
  - ♦ Above, Below
  - ♦ Over, Under
  - ♦ Far, Near
  - ♦ Before, After





## ASSESSMENT

1. Ask the following questions:
  - ◇ You are sitting \_\_\_\_\_ the fan.
  - ◇ 2 comes \_\_\_\_\_ 3.
  - ◇ 8 comes \_\_\_\_\_ 7.
  - ◇ Water flows \_\_\_\_\_ the bridge.
  - ◇ The tree is \_\_\_\_\_ the classroom.



## HOMEWORK / FOLLOW UP

Assign the relevant activities from the textbook on pages 126, 128, 130, 132, 134.



# قومی ترانہ

پاک سرزمین شاد باد      کشور حسین شاد باد  
تو نشان عزم عالی شان      ارض پاکستان!  
مرکز یقین شاد باد

پاک سرزمین کا نظام      قوت اخوت عوام  
قوم، ملک، سلطنت      پائندہ تابندہ باد  
شاد باد منزل مراد

پرچم ستارہ و ہلال      رہبر ترقی و کمال  
ترجمان ماضی شانِ حال      جان استقبال!  
سایہ خدائے ذوالجلال

