CHAPTER: Fun With Numbers

Grade: **3**
Board: **CBSE**
Book: **NCERT**

1.

Chapter Summary and Placement

<Read through the following to understand how this chapter is connected with the previous and next grades and also the important concepts covered in it.>

1. This chapter helps students with visual estimation of numbers – of things arranged randomly and in symmetrical groups.
2. Knowledge of this chapter will help students to read and write 3-digit numbers.
3. This chapter introduces students to decimal system without using the term ‘place value’.

2.

LEARNING OUTCOMES

<On completion of the chapter, students will be able to:>

1. Do visual estimation of numbers – of things arranged randomly and in symmetrical groups.
2. Read and write 3-digit numbers
3. Complete number patterns
4. Count in groups of hundreds and tens.

3. TEACHING PLAN

Follow this section for getting ideas on teaching the content covered in the chapter. The subtopic given in the first column with the matching learning outcome can be explained using instructions and resources listed subsequently

Subtopic and Learning Objective #1

Subtopic:
Guess How Many?

LO:
Do visual estimation of numbers – of things arranged randomly and in symmetrical groups.

1. To make students do visual estimation of numbers

Teacher Activity

1. Ask the students to take out their math notebooks and keep them on their desk.
2. Now pick up one note book and ask the students to guess the number of note books required to cover the top of the teacher's table.
3. Now arrange the notebooks to cover the teacher's table and find out whose guess was the correct one.
4. Explain that a close guess of the actual value by rough calculation or count is called an **estimate.**

Check for understanding:

Without counting or checking, ask the students to guess the total of fingers in the classroom. Ask each student to note down the number in their notebook

Now find out how many children are present and calculate. Don't forget to count the teacher too. Check who estimated correctly.

Resources Suggested

Textbook Blackboard, pen and paper

Subtopic and Learning Objective #1

Sub topic: Century

LO:

Read and write 3-digit numbers

1. To make student read and write 3-digit numbers

Teacher Activity

1. Ask the students if they watch cricket matches. Ask them if they know the name of the player who has made the highest number of centuries in one-day matches. (Sachin Tendulkar). Ask them what a century is. Discuss some important 3-digit helpline numbers that we should all know (100 – Police; 102 – ambulance; 101 – fire etc.)

2. Using pages 16 in the textbook, read the given 3-digit numbers loudly and write the numeral on the board. Guide the children to fill in the blanks in the textbook.

Check for understanding:

Ramu, Seema and Bittu play with marbles in the evening. Check the table below and fill in the blanks:

	No. of Marbles
Ramu	98
Seema	300
Bittu	207

a) Ramu needs ____ more marbles to complete 100.

b) Who has the maximum number of marbles?_____

c) If Bittu gave 7 of his marbles to Ramu, how many will he be left with? _____ How many marbles will Ramu have?

d) Number of marbles in Bittu's collection is equal to ____ century.

Resources Suggested

Textbook Blackboard, pen and paper

Subtopic and Learning Objective #2

Sub topic: Number Patterns

LO:
Complete number patterns

1.To make the student complete number patterns

Teacher Activity

1. Ask the students if they remember estimating the number of fingers in the classroom. Revise with them how they had calculated the answer by taking each child as 10 fingers.

10 20 30 40 50……..

Explain how the above numbers form a pattern

2. Discuss another pattern. Assume that there are 50 children in each class. And there 20 classes in the school. How many children stand in the assembly if all are present? Solve on the board.

50 100 150…….

Check for understanding:

Continue the pattern:

a.755, 750, 745, ___, _____, _____ , _____, _____

b.50, 60, 70, ___, _____, _____ , _____, _____

c.41, 42, 43, ___, _____, _____ , _____,_____

d.307, 309, 311, ___, _____, _____ , _____, _____

e.210, 310, 410, ___, _____, ___ , ___, _____

f.102, 100, 98, ___, _____, _____ , ___, _____

Activity 1 can be performed to make the class understand number patterns

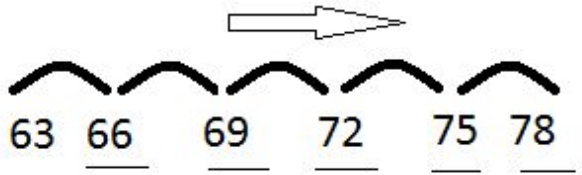
Resources Suggested

Textbook Blackboard, pen and paper

Activity 1

Name of the activity- Draw and Jump
Type of activity – Group
Use it for – Understanding number patterns
Materials – blackboard and chalk
Procedure:
Instructions to the teacher:

1. Divide the class into equal groups of 5 each.
2. Invite the first group near the board.
3. Write a number on the board and give instructions (e.g.; write 63 on the board and ask them to jump 3 steps forward. Each group member will come and add a step as shown below)



Activity 1

1. If all the five steps are correct then the group gets 5 points. Every wrong step loses the group 1 point.
2. Extra points can be given to groups who can correct the steps (1 point for each step corrected)
3. Some instructions are given below:
   a. Jump 2 steps forward starting from 32
   b. Jump 5 steps backwards starting from 850
   c. Jump 10 steps forward starting from 222
   d. Jump 2 steps backward starting from 106
   e. Jump 5 steps forward from 775
   f. Jump 10 steps backward from 940
4. Create more instructions if the number of groups is more.
5. Groups with maximum points will be the winner.

Subtopic and Learning Objective #3

Sub topic: Number Patterns

LO:
Count in groups of hundreds and tens.

1. To make the student count in groups of hundreds, tens and ones

Teacher Activity

1. Read loudly and discuss the story “Lazy Crazy Shop’ on page 23 of the textbook. Follow it up with the exercises give below the story. Explain that managing large numbers becomes easier when counting is done in groups.

Check for understanding:

Complete these calculations given below:

a)500 + 50 + 5 =

b) 100 + 30 + 0 =

c) 600 + 0 + 9 =

d) 0 + 20 + 8 =

e) 200 + 40 + 3 =

Activity 2 can be performed to help the class count in groups of hundreds, tens and ones

Resources Suggested

Textbook Blackboard, pen and paper

Activity 2

Name of the activity- How many?
Type of activity – Group
Use it for – count in groups of hundreds, tens and ones
Materials –
Procedure:
Instructions to the teacher:

1. Divide the class into 3 equal groups. Ask them to come and stand near the blackboard.
2. Group 1 will be hundreds.
3. Group 2 will be tens.
4. Group 3 will be ones.
5. Call out a number (e.g. 321 – 3 children from hundreds group will stand on the chairs. 2 children of tens group will stand on floor and 1 child of ones group will sit on the chairs.)



Activity 2

1. Ask each group to ensure that all the members of their group get a chance to play.
2. Correct formation by each group gets the group 1 point. The groups are not allowed to re-adjust.
3. Some numbers are given below:

89; 145; 540; 9; 407; 600; 987; 234; 17; 808

4. The group with maximum points wins.

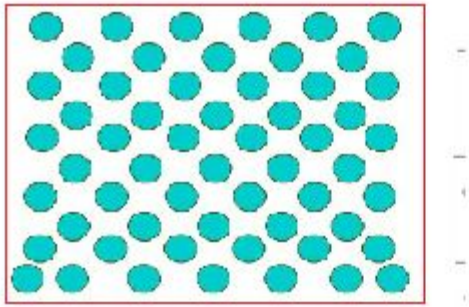
4. WORKSHEETS

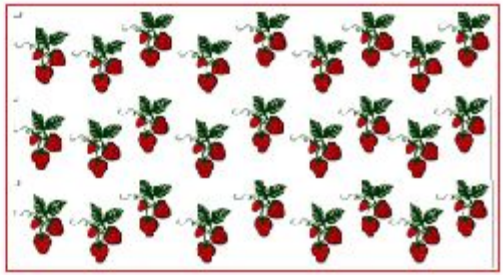
Print or copy the worksheet questions on the blackboard and ask the students to attempt them. They can be given as homework or a class test as well.

Worksheet 1

Use it like: test after the chapter is complete, homework

Quickly look at the boxes below and estimate the number of circles and cherries in each.





Worksheet 2

Write the correct number

Two hundred sixty

One hundred five

Seven hundred forty-one

Nine hundred

400 + 80 +2

300 + 50 + 8

6 + 30 + 500

Worksheet 3

Use it like: classwork, homework, test

Continue the patterns

88, 90, 92, ___, _____, _____ , _____, _____

555, 565, 575, ___, _____, _____ , _____, _____

17, 117, 217, ___, _____, _____ , _____, _____

950, 900, 850, ___, _____, _____ , _____, _____

125, 120, 115, ___, _____, _____ , _____, _____

Worksheet 4

What's my number?

a) My number has three digits. It is smaller than 750 but greater than 740.
The second digit is smaller than 8 but bigger than 6.
The third digit is a sum of 2 and 5. What's my number?

b) My number has two digits. The first digit is 8 less than 9.
The second digit is 311 less than 319. What's my number?

c) My number has three digits. The third digit is 45 less than 48.
The second digit is 4+2.
The first digit is 212 less than 217. What's my number?

d) My number has two digits. The first digit is the first digit of 99.
The second digit is the last digit of number 44. What's my number?

Worksheet 5

If below hundred is represented  and ten  and one by  then writes the number below :

a. 

b. 

c. 

d. 

e. 

5. SOLUTIONS

This section gives you sample answers for activities and questions listed above.

Worksheet 2

260
105
741
900
482
358
536

Worksheet 3

94, 96, 98, 100, 102
585, 595, 605, 615, 625
317, 417, 517, 617, 717
800, 750, 700, 650, 600
110, 105, 100, 95, 90

Worksheet 4

a) 777
b) 18
c) 563
d) 94

Worksheet 5

a.162

b.301

c.46

d.594

e.740

6. EXTRA RESOURCES

Carry out the following suggested activities/ tasks if you have the time and resources to do them

Teacher can use these videos if time and facilities permit:

1. https://www.youtube.com/watch?v=vqfGCDQHUEM estimation
2. https://www.youtube.com/watch?v=DiMa-J8Oj0Y 4 digit numbers
3. https://www.youtube.com/watch?v=hBgkQOa_c1A patterns
4. https://www.youtube.com/watch?v=goWi381mnkE Number Patterns
5. https://www.youtube.com/watch?v=L2kNtEr_Yng reading large numbers