Vision Empower & XRCVC Teacher Instruction KIT 5 Digit Numbers

Syllabus: Karnataka State Board Subject: Math Grade: 5 Textbook Name: Karnataka State Board Chapter Number & Name: 1. 5 Digit Numbers

1. OVERVIEW

1.1 OBJECTIVE & PREREQUISITES

Objective

- Recap of 4-digit numbers.
- Introducing 5-digit number
- Place Value of 5-Digit Number
- Expanded form of 5-Digit Number
- Greatest 5-Digit Number
- Smallest 5-Digit Number
- Preceding number of a 5-Digit Number
- Succeeding number of a 5-Digit Number

Prerequisite Concept

• 4 digit numbers *TIK_MATH_G4_CH2_Numbers*

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Kindly Note: Activities marked with * are mandatory

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2. LEARN

2.1 KEY POINTS

- 5 digit number: A 5-digit number is a number that has 5 digits where the first digit must be 1 or greater.
- Place value and expanded form: A digit's position in a number and its resulting value is called place value. When we expand a number to show the value of each digit, we're writing that number in expanded form. Writing numbers in expanded form just means that we're showing the value of each digit in the number.

- Preceding and Succeeding: Proceeding means the previous number. If it's a counting line then the previous number is the present number minus one. Succeeding number is the present number plus one. To find the preceding and succeeding numbers subtract and add the number.
- Greatest and smallest: The smallest 5-digit number is 1 followed by 4 zeros. This number is called ten thousand which is obtained by arranging the numbers in an ascending order.
- The largest 5-digit number is 9 followed by another 4 nines. This number is called ninety-nine thousand nine hundred ninety-nine which is obtained by arranging the numbers in a descending order.

2.2 LEARN MORE

3. ENGAGE

3.1 INTEREST GENERATION ACTIVITY **PLAY MYSTERY NUMBERS Activity 1: Play - Mystery Numbers** *Materials required: None Prerequisites: Counting, number recognition,*

Activity Flow

- 1. The mystery number has a 7 in the thousands place 2 in the tens place 1 in the ones place 0 in the hundreds place. What is the mystery number? Answer: 7021.
- 2. The mystery number has a 4 in the thousands place 6 in the ones place 5 in the hundreds place 3 in the tens place. What is the mystery number? Answer: 4,536
- 3. The mystery number has 1 in the ones place 2 in the tens place 5 in the hundreds place 3 in the thousands place. What is the mystery number? Answer: 3,521
- 4. The mystery number has a 9 in the hundreds place 9 in the ones place 9 in the tens place 9 thousands place. What is the mystery number? Answer: 9999

Once all of them answer all the questions, ask them, what if we add 1 to the answer they got in question 4. Then parallely introduce the 5 digit numbers.

3.2 CONCEPT INTRODUCTION ACTIVITIES

4 DIGIT NUMBERS

Activity 2: Recap of 4 digit numbers

Materials required: Braille card deck Prerequisites: 4 digit numbers

Activity Flow

Ask the following questions and let students answer it orally.

1. Write the expanded form of numbers.

- a) 2684 = 2 times 1000 + 6 times 100 + 8 times 10 + 4 times 1
- b) 9806 = 9 times 1000 + 8 times 100 + 0 times 10 + 6 times 1
- c) 1111 = 1 times 1000 + 1 times 100 + 1 times 10 + 1 times 1
- d) 4562 = 4 times 1000 + 5 times 100 + 6 times 10 + 2 times 1

Give them the four braille cards to each of them and ask the children to make larger and smallest 4 digit numbers.

2. Which is the greatest and smallest number among these - 3245, 6743, 9812, 9900. Greatest number is 9900 Smallest number is 3245

3. Arrange the numbers in an ascending and descending order. Also, ask how they do it. 5534, 5765, 5555, 5859. Ascending order - 5534, 5555, 5765, and 5859. Descending order - 5859, 5765, 5555, and 5534.

4. What is the smallest and greatest 4-digit number? Greatest number is 9999 Smallest number is 1000

5 DIGIT NUMBER

Activity 3: Introducing 5 digit number Materials required: Braille number cards from 0 to 9 Prerequisites: 4 digit number

Activity Flow

Start with the following questions.

1. What will be the number, if you add 1 to 999? The answer is 1000

2. What will be the number, if you add 2 to 9999? The answer is 1000.

Let us do an activity to understand a 5 digit number.

Activity 1:

- Give Braille cards from 0 to 9 to the students and ask them to tell the total number of cards. The children should respond with the answer '10 cards'.
- Ask the class to form 5-digit numbers using the cards that they have been provided.
- Note: A 5-digit number cannot start with the digit 0.
- How many 5-digit numbers can they form at once using all their 10 cards? Answer is two 5-digit numbers.
- Let the child read out their numbers.
- Summarizing the activity the numbers from 10,000 to 99,999 are five digit numbers. Here 10,000 is the smallest number and 99,999 is the greatest five digit number.

Activity 2:

- Select 5 students. Each student represents a single digit.
- For example Kavya represents the digit 1, Divya represents the digit 2, Ganesh represents the digit 3, Surya represents the digit 4 and Mohan represents the digit 5.
- Ask the students to sit next to each other in the following order Kavya, Divya, Ganesh, Surya, Mohan. They now represent a 5 digit number.
- Ask the class , what is the 5 digit number with respect to the order they are seated. The number is 12345.
- Similarly, do the reverse. Give 5 digit number 54321 and ask those 5 students to sit accordingly with respect to their number name.
- Repeat the above procedure for the digits 5, 6, 7, 8, 9.

PLACE VALUE OF 5 DIGIT NUMBER

Activity 4: Place value of 5 digit number

Materials required: Braille number cards from 0 to 9 Prerequisites: Place value of 4 digit number

Activity Flow

Ask the children to arrange the following numbers in descending order (from higher to lower). 345, 502, 112, 654, 090. Descending order- 654, 502, 345, 112, 090. 5432, 2345, 3452, 4532. Descending order- 5432, 4532, 3452, 2345.

Activity 1:

- Select 5 students. Each student represents a single digit.
 For example Kavya represents the digit 1, Divya represents the digit 2, Ganesh represents the digit 3, Surya represents the digit 4 and Mohan represents the digit 5.
- Ask the students to sit next to each other in the following order Kavya, Divya, Ganesh, Surya, Mohan. They now represent a 5 digit number. Ask the class , what is the 5 digit number with respect to the order they are seated and the place value of each of them? The number is 12345.
- Kavya is in the ten thousand's place and her place value is 1 times 10,000, that is, 10000.

Divya is in the thousand's place and her place value is 2 times 1000, that is, 2000. Ganesh is in the hundred's place and his place value is 3 times 100, that is, 300. Surya is in the ten's place and his place value is 4 times 10, that is, 40. Mohan is in the one's place and his place value is 5 times 1, that is, 5.

- Ask Kavya to move to the third place and simultaneously let Ganesh move to the first place. The number that the children now form is 32145. Ask the class to figure out the new number.
- Ask students for the place value of each digit in the new number.
- Move the children to different positions to form new numbers and let the class figure out the number along with the place value.

Note: The value, which each of the children has and which does not change with respect to place, is called face value.

Activity 2:

- Give any 5 braille number cards to each of the 5 students and let each of them arrange and get the 5 digit number.
- Then the teacher should call any random number along with place value and whichever number the teacher calls and if the student has that number then he/she will be out of the game.
 For example: The 4 digit number is 5134.
- When the teacher calls number 3 in tens place, if any student comes across a 4 digit number having number 3 in tens place will be out of the game.

- Similarly, the teacher can continue the game for the rest of the students, by which students will be able to learn the concept of place value.
- This activity can be done for any number of digits depending on the grades.

EXPANDED FORM OF 5 DIGIT NUMBER

Activity 5: Expanded form of 5 digit number

Materials required: None Prerequisites: Expanded form of 4 digit number

Activity Flow

Ask the students to provide the place value for each digit for the following number - 78945 7 times ten thousand 8 times thousand 9 times hundred 4 times ten 5 times one

Let's start with an example:

- Kavya represents 1, Surya represents 2, Ganesh represents 3, Mohan represents 4, Divya represents 5. Which are in an order and representing 5 digit numbers?
- Ask students, what is the 5 digit number obtained with respect to an order? The number is 12345.
- Then ask students, the place value and face value of the 5 digit number.
- Ask children to multiply the place value with face value corresponding to each digit and put plus sign in between. This gives an expanded form of number. Which is given by,

1 times 10000 + 2 times 1000 + 3 times 100 + 4 times 10 + 5 times 1 = 12345Write the 5 digit number and its expanded form for the following order.

- 1. Ganesh, Mohan, Divya, Kavya, Surya.
- 2. Mohan, Divya, Kavya, Surya, Ganesh.

GREATEST 5 DIGIT NUMBER

Activity 6: Greatest 5 digit number

Materials required: Tactile ruler Prerequisites: Measure height, descending order of 4 digit number

Activity Flow

Start with the following questions.
1. Who is taller in the class?
2. Caliper with 10 cm is longer than Caliper with 15 cm. True or false? How?
3. Which is the greater number between 56437 and 56537.
Answer is 56537. Ask students, how will they find it?
Later, give them a hint: Can place value concept help in determining the greatest number?

The basic rule to get the greatest 5-digit number is to arrange the given digits in a descending order from left to right.

- Ask the students to get the greatest 4-digit number from the given digits, 6, 4, 8, 1 using braille number cards. Answer is 8641. Ask students, how did they do it?
- Similarly, ask students to form the greatest 5 digit number using the same 4 digits 6, 4, 1, 8.

Answer is 86410. Ask them, why is there zero in one's place?

 Ask students to get the first 3 greatest five digit numbers using the same 4 digits in such a way that, digit 6 should be in ten thousand's place, thousand's place and hundreds place.

Which are those numbers in the given following?

- 86410 84610
- 68410
- 84160
- 64810

SMALLEST 5 DIGIT NUMBER

Activity 7: Smallest 5 digit number

Materials required: Braille cards from 0 to 9, Taylor frame Prerequisites: Ascending order of 4 digit number

Activity Flow

1. Caliper with 8 cm is shorter than caliper with 9cm. Is it true or false? Answer is true. Ask the students to give the reason.

The basic rule to get the smallest 5-digit number is to arrange the given digits in an ascending order from left to right.

 Ask students to get the smallest 4-digit number from the given digits, 6, 4, 8 and 1 using braille number cards.

Answer is 1468. Ask students, how did they do it?

• Similarly, ask students to form a greatest 5 digit number using the same 4 digits 6, 4, 1 and 8. Ask them, where will they place digit zero in order to get the smallest 5 digit number?

Answer is 10468.

 Ask students to get the first 3 smallest five digit numbers using the same 4 digits in such a way that, digit 6 should be in ten thousand's place, thousand's place and hundreds place.

Which are those numbers in the given following?

PRECEDING NUMBER OF 5 DIGIT NUMBER

Activity 8: Preceding number of 5 digit number

Materials required: None Prerequisites: Preceding number

Activity Flow

1. You need to walk 5 steps to reach your classroom. You meet your friend, when you are one step away from the classroom. How many steps have you already taken?

Answer is 4.

2. If the strength of the present class is 30 and in the previous year it was 1 less than the present class. Then, what was the class strength in the previous year?

Answer is 29.

Ask students, what is the number 1 less than the number 98? Answer is 97. Similarly, ask them the number 1 less than 100, 2999, 3654. Answer: 99, 2998, 3653. So, ask them which operation they are doing to get the previous number? We need to subtract number 1 from the given number and the obtained previous number is also called the preceding number.

Ask them, the preceding number for the following numbers.

For 83,653 the preceding number is 83,652. For 25,045 the preceding number is 25,044. For 20,002 the preceding number is 20,001. For 76,908 the preceding number is 76,907.

SUCCEEDING NUMBER

Activity 9: Succeeding number of a 5 digit number

Materials required: Braille number cards from 0 to 9 Prerequisites: Succeeding number

Activity Flow

1. Two boys are in the walking race, boy 1 has taken 17 steps and boy 2 is one step ahead of boy 1. How many steps has boy 2 taken?

Answer is 18.

2. If the strength of the class in the previous year was 51. This year it is 1 more than the strength of the previous year. Then what is the class strength this year?

Answer is 52.

- Ask students the question, what is 1 more than 98? Answer is 99.
- Similarly, ask them 1 more than 100, 2999, 36542.
 Answer: 101, 3000, 36543.
- Ask them which of the basic 4 mathematical operations (addition, subtraction, multiplication and division) they are using, to get the next number?
 Answer: We need to add 1 to the given number to obtain the next number.
- The next number is also called the succeeding number of a given number.
- Make groups of minimum 2 children in each. Let one of the children give the 5 digit number to the partner and that partner has to give the succeeding number for the given number by arranging the braille number cards from 0 to 9.
- Verify the answers with the help of the teacher.
- Similarly, repeat the above activity by interchanging the children.
- Then, let the teacher give the following numbers to both the groups and ask the students to find the succeeding numbers using Braille cards from 0 to 9. 90,123
 - 67,980
 - 34,529
 - 70 1.02

78,450

3.3 LET'S DISCUSS: RELATE TO DAILY LIFE*

There are many situations we use where the number of things counted would be more than 6 digits.

They are,

- 1) Mobile numbers
- 2) Bank account numbers
- 3) Vehicle registration numbers
- 4) Aadhaar card number
- 5) Credit card or debit card numbers
- 6) Consumption of water in a city in a day.
- 7) Electricity bill
- 8) Business done in a day in market

4. EXERCISES & REINFORCEMENT

4.1 EXERCISES & REINFORCEMENT

Activity 10: Homework

Materials required: None Prerequisites: 5 digit number

Activity Flow

- Write the following numbers in figures using commas.
- 1. Forty five thousand six hundred eighteen.
- 2. Thirteen thousand seven hundred nine.
- Write the following numbers in the expanded form.
- 1. 19,203
- 2. 38,264
- Write the following expanded form of numbers in the standard form.
- 1. $7 \times 10000 + 2 \times 1000 + 8 \times 100 + 3 \times 10 + 8 \times 1$
- 2. $6 \times$ ten thousand + $3 \times$ thousand + $5 \times$ hundred +1 tens + $7 \times$ ones
- Form the greatest and the smallest 5 digit numbers using the following digits without repetition.
- 1. 8, 1, 6, 2, 5
- 2. 7, 0, 6, 1, 3
- Write the following numbers in increasing order (ascending order)

- *1. 30435, 70533, 20411, 40623.*
- *2.* 77770, 77077, 77777, 70777.
- Write the following numbers in decreasing order (descending order)
- 1. 12344, 12340, 12304, 13244.
- 2. 61234, 62134, 21364, 12364.

4.2 IMPORTANT GUIDELINES*

Exercise Reading

It is very important that the children practice their learnings as well as their reading. Hence have the children read out the newly learned concepts from their textbooks or other available resources.

Perform Textbook Activity

It is good practice to have the children perform the textbook activities. Your textbook activities might not be accessible hence go through this resource to learn how to make textbook content accessible

Provide Homework

To evaluate their understanding and to help the student revise and implement the new learnt concept ensure to provide them with homework. Students should perform one or two of the questions mentioned above or from the textbook exercises with the teacher in Class and the remaining may be given for homework. Also, ensure that the student knows their special skills linked to independently using their accessible books as it will be critical to doing homework independently

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short_description: Karnataka, Tamilnadu, Delhi, Kerala, Fifth grade, Math, 5 digit numbers, 4 digit numbers, Numbers, Place value, Expanded form, Smallest, Greatest, Succeeding, Preceding