Vision Empower & XRCVC

Teacher Instruction KIT

Subtraction

Syllabus: Karnataka State Board
Subject: Mathematics
Grade: 1
Textbook Name:
Chapter Number & Name: 6. Subtraction

1. OVERVIEW

1.1 OBJECTIVE AND PREREQUISITES

Objective

- Subtract using objects and pictures
- Identify and use the subtraction symbol

Prerequisite Concept

- Counting
- Numbers
- Addition

Content Index

*Kindly Note: Activities marked with * are mandatory*

2. LEARN

2.1 KEY POINTS

- The process of taking one number or amount away from another is called subtraction.
- When we subtract, the number of things in the group it reduces or becomes less.
- The result of a subtraction is called a difference.
- Subtraction is signified by the minus sign, −.

2.2 LEARN MORE
None

3. ENGAGE

3.1 INTEREST GENERATION ACTIVITY

INTRODUCTION TO THE CONCEPT

Activity 1: Five Little Monkeys *
Materials Required: None
Prerequisites*:* None

Activity Flow
Read out / sing / play the following song to the children:
“Five little monkeys jumping on the bed,
One fell down and bumped his head,
Mama called the doctor and the doctor said,
No more monkeys jumping on the bed!
Four little monkeys jumping on the bed,
One fell down and bumped his head,
Mama called the doctor and the doctor said,
No more monkeys jumping on the bed!
Three little monkeys jumping on the bed,

One fell down and bumped her head,
Mama called the doctor and the doctor said,
No more monkeys jumping on the bed!
Two little monkeys jumping on the bed,
One fell down and bumped his head,
Mama called the doctor and the doctor said,
No more monkeys jumping on the bed!
One little monkey jumping on the bed,
She fell down and bumped her head,
Mama called the doctor and the doctor said,
Put those monkeys right to bed!"
After the first 2 repetitions, pause and allow the children the time to supply the right number of monkeys.

3.2 CONCEPT INTRODUCTION ACTIVITIES

CONCEPT OF SUBTRACTION

Activity 2: What Am I Hiding? *

Materials Required: 10 toffees (approximately the size of Éclairs)
Prerequisites: None

Activity Flow

Lay out the chocolates (or any other objects of similar size) on the table in a straight line. Allow the children to touch and explore them. Explain to them that you are going to play a game. Now put your hand over a certain number of chocolates in such a way that they are hidden beneath your hand. Let the children touch your hand, as well as the chocolates left on the table. Urge them to find out how many chocolates you are hiding. Play this multiple times so that each child in your class has a chance to figure out how many chocolates are being hidden.

Activity 3: The Action of Subtraction

Materials Required: None
Prerequisites: None

Activity Flow

Discuss what happened in the previous game or activity when the chocolates were being hidden with your hand. It was making the total less than it was. Now, read out this extract from the book "The Action of Subtraction" by Brian P. Cleary, to give the children a better idea of what subtraction is:
"Subtraction is an action
that will make your total less,
whether ice-cream scoops

or hula hoops
or inches from a dress.
Whatever you are counting,
it will take away a part,
and leave you then with not as much
as you had at the start.
If 7 angry bulldogs
were barking at your door,
a kitten could scare 3 away.
Then you'd be left with 4.
And what if 13 hornets
had nested in your tree?
If 10 of them would just buzz off,
you'd then have only3.
Do you see what subtraction does?
It changes the amount,
so you'll wind up with fewer
when you do your final count.
"Minus" means to take away
some number from the whole.
See! The numbers move toward 0
with a shrinking kind of action.
And all of this is possible
because we have subtraction!"

Activity 4: Same and Different *

Materials Required: Papers, 2 different types of bindis that are of different shapes/sizes/textures (at least 10 of each type).

Prerequisites: None

Activity Flow

On a piece of paper, arrange the bindis on a grid. That is, using the first type of bindis, make a grid of 3 rows and 3 columns by sticking 3 rows of 3 bindis in a row. Now, make a similar grid with the 2nd type of bindis right next to the first type. Allow each child to now touch the paper and identify the difference in the 2 bindis. Now, ask them to find the total number of bindis on the paper. Once the total has been found, tell them to now find how many bindis would be left if we were to remove all the bindis of the 2nd type. Do not let them physically remove the bindis, but ask them to count and subtract. Do many more problems with the bindis until the children are clear about it.

3.3 LET'S DISCUSS: RELATE TO DAILY LIFE*

Real life is full of opportunities for children to subtract. Now, using the children's own daily lives and routines at school and at home, discuss how we use subtraction in our everyday lives. Here are some examples you could talk about:
"You have 3 toy cars. How many will you have left if you let your friend play with 1?"
"I have 20 braille slates with me. How many will I have if I give you all 1 each?"
What about chapatis that you get for lunch/dinner? Is there subtraction there? Or samosas or biscuits?
What about money? When your parents pay for something while shopping they are giving money for it. What would happen to the total money they have when they give the money to the shopkeeper?
Ask the children to give examples of their own.

4. EXERCISES & REINFORCEMENT

4.1 REINFORCEMENT

Activity 5: Cup Subtraction*
Materials Required: 3 paper cups and 10 ice-cream sticks per student
Prerequisites*:* None

Activity Flow

Let's work out the problem 5 minus 3. Use the paper cups to demonstrate subtraction to the students. Lay out the three cups vertically on the table. Now, set out a problem in the cups. For instance, in the first cup, place 5 sticks, and leave the 2nd and 3rd cup empty. Now, ask the children to take away 3 sticks from the first cup as the problem we are working with is 5 minus 3, and place the 3 sticks in the 2nd cup. How many sticks are remaining in the 1st cup? Yes, we have two sticks remaining which needs to be picked and placed in the 3rd cup, which is the answer.

Practice some problems in this way.

Activity 6: Lego Subtraction Race
Materials Required: Lego blocks and tactile dice
Prerequisites*:* The child should know how to use the dice.

Activity Flow
Distribute lego pieces and a dice to each child. It is recommended that you start with 20 lego pieces before moving on to bigger numbers. The object of the game is to see who can lose all of their bricks first. First, ask the children to stack up their blocks and make a tower. Now, each child should roll the die and subtract the number they got from the total. For

instance, if a child rolled a 3 on the die, she should now physically remove 3 blocks from the top of the tower, and then count how many are left. As they do this, encourage them to speak aloud their numbers. For example, “I had 20 bricks. I took away 2 and now have 18.” The child who hits 0 first, wins the game.

Teaching Tips

If there are any additional teaching tips then utilize this section to mention them.

References

None

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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