Vision Empower & XRCVC

Teacher Instruction KIT

Division

Syllabus: Karnataka State Board
Subject: Mathematics
Grade: Second
Textbook Name: Mathematics-Text cum Workbook(Revised)-Second Standard
Chapter Number & Name: 6. Division

1. OVERVIEW

1.1 OBJECTIVE & PREREQUISITES

Objective

To understand division through equal sharing.
To do various activities related to division through equal sharing.

Prerequisite Concept

- Basic Multiplication
- Place value

Refer to **Grade2_Math_Ch05-Multiplication**
VE_TIK_Math_G1-08-Units & Tens

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*Kindly Note: Activities marked with * are mandatory*

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2. LEARN

2.1 KEY POINTS

The division is a method of distributing a group of things into equal parts. It is one of the four basic operations of arithmetic, which gives a fair result of sharing. The division is an operation inverse of multiplication.

2.2 LEARN MORE

None

3. ENGAGE

3.1 INTEREST GENERATION ACTIVITY

Story on Division

Activity 1: Bean Thirteen by Mattew Mc Elligott *

Materials Required: Counters/Rajma/Lima beans

Prerequisites: None

Activity Flow

Let's all listen up to a story about two insect buddies, Ralph and Laura.

It was a warm summer night. Ralph and Flora were picking beans for dinner.
"How many do we have?" asked Flora.
"Looks like 12'', said Ralph.

"I will pick one more," said Flora.
"**Don't do it**!" shouted Ralph.

"Why on earth not?" asked Flora.
"13 is an unlucky number," said Ralph.
"Everyone knows that."
"You're being silly," said Flora.
"I am not," said Ralph.

At home, Ralph and Flora spread the beans out on the table. They made two piles, one for each of them. Each pile had six beans.
"Oh, look." said Flora. "There's one left over. You take it, Ralph"
"Bean thirteen?" gasped Ralph.
" Never! It's bad luck."
"Ralph," said Flora, "Please don't make a fuss."

“I’m not eating it,” said Ralph,
“And you can’t make me eat too”

“I have an idea”, said Flora.
“I’m not eating it.” Said Ralph.
Flora called their friend April and said, “April, would you like to come over for dinner, we are having beans?”
“I don’t understand”, said Ralph. “Are we only going to feed April one bean?”
“Of course not”, said Flora.

We are going to make three piles, one for each of us. Each pile has four beans.
“Oh, look.” said Flora. “There’s one left over again. You take it, Ralph”
“Bean thirteen?” gasped Ralph.
“Never! It’s bad luck.”
They tried making a pile of four, still they had one bean left. Bean thirteen is a big trouble.
Let’s try making a pile of six, still we have one bean left.
Suddenly there was a knock at the door and Flora opens the door to find many guests. Ralph in a hurry spills all the beans. They gather it up and invite the guests inside and offer them the beans to eat.
“Did all of them have a good dinner?” asked Flora and Laura. The guests answered, “Yes indeed.” All the insect guests were happy to have a good meal.
But what happened to bean thirteen? asked Ralph.
Flora answered, somebody ate it. It could be anybody, me or you too.
What a great story. We counted the beans, shared the beans equally and later ate the beans.

3.2 CONCEPT INTRODUCTION ACTIVITIES

EQUAL DISTRIBUTION

Activity 2: Getting started with equal distribution*

Materials Required: bowls and biscuits.
Prerequisites: Oral Numbers 0 to 99, Counting skill

Activity Flow
Here, I have a packet of 6 biscuits. We have to divide the biscuits among three children. Ravi, Neeta, Lakshmi. Let’s place three bowls and assign one bowl for each of them. One bowl for Ravi, one for Neeta and one for Lakshmi. Let’s start distributing the biscuits. Firstly, start by placing one biscuit in each bowl then place another set of three biscuits and continue till you are left with no biscuits.
How many biscuits are there in each bowl? Let’s count. Yes, we have 2 biscuits in each bowl. Hence Ravi gets two biscuits, Neeta gets two biscuits and Lakshmi gets two biscuits. So Ravi, Neeta and Lakshmi get 2 biscuits each to eat.

Let's summarize: When we divide 6 biscuits among three children, each child gets 2 biscuits. Wasn't that easy.
The teacher can demonstrate equal distribution by giving more examples. 12 divided by 3, 10 divided by 2.

Activity 3: Division using Bangle & counters*

Materials Required: Bangles, chocolates/beads/seeds/counters.
Prerequisites: Oral Numbers 0 to 99, Counting skill

Activity Flow

Let's work out a problem. It's Tara's Birthday today and she has 8 chocolates which she wants to distribute among 2 of her friends Raj and Ravi? How many will each of her friends get?

Tara has 8 chocolates. So imagine I am Tara for today. I have 8 chocolates with me. Now I place two bangles to represent my two friends, Raj and Ravi. Now let's start sharing. We begin by placing 1 chocolate in bangle 1 and another chocolate in bangle 2 and repeat the process until we are left with none. So how many chocolates do we have inside each bangle. Let us count and find out. Yes, we have 4 chocolates inside bangle 1 and 4 chocolates inside bangle 2. So, Raj gets 4 chocolates and Ravi gets 4 chocolates from Tara.

3.3 LET'S DISCUSS: RELATE TO DAILY LIFE

- Counting in everyday life, especially quick totaling of the number of quantities
- Quantifying objects and information (data)
- Give the students problems from every-day life instances. For example, they can be asked how many pages they have read in a week and so how many would they have read if they read the same number of pages everyday (i.e. divide the total number of pages read by 7). Or ask them if the class was divided into, say 3 groups and 12 books had to be divided between the groups, then how many books would each group get?

4. EXERCISES & REINFORCEMENT

4.1 REINFORCEMENT

Activity 4: Make equal shares *

Materials Required: Bangles, beads/seeds/counters
Prerequisites: Counting, number recognition, equal sharing concept

Activity Flow

The teacher can help students with reinforcement of the division concept by using the bangles and counters as stated above in Activity#3. The teacher can demonstrate one example and let the children work out the other problems independently.

Question:

Make equal shares of number 5 into 5 parts.

Make equal shares of number 9 into 3 parts.

The teacher can ask students to check if the number of objects inside each bangle is equal or not. The teacher can check if the students are sharing correctly.

Give the students a lot of practice problems.

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

Ask children how they would share the idlis, dosas, chapattis, bread slices, biscuits among their family members.

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