2   Operations on Large Numbers

LESSON PLAN

SPECIFIC OBJECTIVES

The students will
◗ know the basic operations of large numbers.
◗ understand the properties of fundamental operations.
◗ learn how to solve word problems.
◗ practise the lattice method of multiplication.
◗ learn the shortcuts of multiplication.

CONTENTS EXPLAINED INSIDE THE CHAPTER
◗ The Basic Operations of Addition and Subtraction (pages 123–126)
◗ Multiplication (pages 128–131)
◗ Division (pages 132–133)

TEACHING AIDS
◗ There is no need for extra materials in this chapter.

TEACHING STRATEGY
◗ First, the teacher should recall about the operations on numbers up to 6-digits and then, she should ask them to do 'Let Us Recall' exercise.
◗ Next, the teacher should talk about the terms associated with addition, viz. addends and sum. Also, she should recall the terms minuend, subtrahend and difference as well. Then, the teacher should ask the students to do the operations of addition/subtraction and solve the word problems involving these operations.
◗ Further, the teacher should introduce them about the operation of multiplication. She should explain to them the shortcut method as well as lattice method to find out the product of two factors. She should also focus on its applications in daily life. Then, she should ask them to do exercise 2.2.
◗ Moreover, she should teach them a few shortcut tricks of multiplication by which students

can calculate the sum mentally. For its explanation, she should go to pages 130–131 and then ask them to do exercise 2.3.

◗ After that, the teacher should introduce them about the operation of division for large numbers. She should also explain them how to check the sum using division algorithm. She should also motivate them to solve word problems involving division.

◗ Further, the teacher should encourage them to solve Think and Answer questions and puzzle.

◗ Finally, the teacher should involve the class in performing Maths Lab Activity.

EXPECTED LEARNING OUTCOMES

Students are able to

◗ do the four basic operations, viz., addition, subtraction, multiplication and division.

◗ find out the missing digits in the sum of addition/subtraction.

◗ solve the word problems involving any of the operations.

◗ do the multiplication mentally using shortcut tricks.

◗ apply these operations in daily life.

SUGGESTED ACTIVITY

◗ **Aim:** To learn the four basic operations

Materials: A chalk, blackboard and number cards 0–9

Instruction for teacher:

First, invite the students in pairs and ask them to select 2–3 cards.

Ask them to form any 2- or 3-digit numbers using these cards and do any operation on the blackboard. For example, the students pick up 1 and 9. They can form two numbers 19 and 91. They use these two number in operations as follow:

$19 + 91 = 110$; $91 - 19 = 72$; $91 \times 19 = 1729$; $91 \div 19$; Q = 4 and R = 15

They can use any combination of operations.

For the next round, invite another pair of students and provide them with another combination of cards for doing other operations.

Also, she can instruct the rest of the class to do some other operations at the same time for sorting out numbers.