

Perimeter, Area and Volume

SPECIFIC OBJECTIVES

The students will

- learn to calculate the perimeter of rectilinear shapes.
- know the formulas to find out the perimeter of a square and a rectangle.
- understand the meaning of the terms 'Area' and 'Volume'.
- learn how to calculate approximate area of the irregular shapes using a graph/a square paper.
- know the formulas to find out the area of a square and a rectangle.
- be able to find out the area of paths inside/outside the field/park/garden.
- learn to calculate the volume of a cube and a cuboid using formulas or by counting unit blocks.
- be able to calculate the area of a shape by splitting it into simpler squares/rectangles.

CONTENTS EXPLAINED INSIDE THE CHAPTER

- Perimeter (pages 153–156)
- Area (pages 156–158)
- More Area–Irregular Shapes/Paths (pages 158–162)
- Volume (pages 162–165)

TEACHING AIDS

Tracing paper, chart paper, square grid/graph paper, a ruler, a measuring tape, a pencil, cubic and cuboidal boxes/solids, unit blocks, postcards, etc.

TEACHING STRATEGY

- To initiate the chapter, the teacher should ask the students to do 'Let Us Recall' exercise to recall the concept learnt in the previous class.
- Next, the teacher should talk to them about the perimeter of rectilinear shapes and describe

the formula to calculate the perimeter of a rectangle/square. For text and exercise, she should go to pages 153–156.

- After that, the teacher should teach them the area of other shapes. Moreover, she should teach them how to derive formulas to calculate the area of a rectangle and a square. For text and exercise, she should go to pages 156–158.
- Further, the teacher should develop their ideas of irregular shapes using grid/graph papers. She should also explain to them how to find out the area of paths running across the field/parks, etc. For text and exercise, she should go to pages 158–162.
- Thereafter, the teacher should discuss with them about the terms **volume** and **space** with a demo for better understanding. She should describe them the formulas to find out the volume of a cuboid/a cube. For text and exercise, she should go to pages 162–165. For developing their interest, she can involve them in performing Maths Lab Activity.
- Now, the teacher should ask the students to solve the tasks given in the puzzle.

EXPECTED LEARNING OUTCOMES

Students are able to

- find out the perimeter of different rectilinear shapes.
- calculate the perimeter of a square/a rectangle using formulas.
- explain the terms 'area' and 'volume'.
- find out the area of a rectangle/square using formulas.
- calculate the area of irregular shapes using a grid/graph paper.
- find out the area of paths running inside/outside in a field.
- evaluate the area of some special shapes by dividing it into simpler squares/rectangles.

SUGGESTED FUN ZONE

Here are few cutouts that can be arranged to form a chessboard. The teacher may provide these cutouts to the students in groups and ask them to complete the board. The team may be rewarded if they do it first.

