

# Geometry

## SPECIFIC OBJECTIVES

The students will

- recapitulate the concepts learnt earlier.
- know the basic terms associated with geometry.
- learn how to measure and draw a line segment using a ruler.
- know about angles, their names and regions of an angle.
- read about different types of polygons.
- learn drawing a circle using a pair of compasses.
- know the terms related to a circle.
- learn about creation of designs using circles.

## CONTENTS EXPLAINED INSIDE THE CHAPTER

- Basic Ideas of Geometry (pages 165–166)
- Measuring and Drawing Line Segment (pages 167–169)
- Angles (pages 169–170)
- Types of Polygons (pages 170–172)
- Circles (pages 172–175)

## TEACHING AIDS

A tracing paper, a plain paper, a pencil, a geometry box, solids with circular base, circular objects like coins, bangles, paper plates, etc., a pair of scissors and markers.

## TEACHING STRATEGY

- As the students already know simple 2D and 3D figures, so, the teacher should first recall them to initiate the chapter. Then, she should ask them to observe the figures shown on page 165 and write their names on a separate sheet of paper. Then, she should instruct them to fill in the grid of crossword puzzle.
- Again, the teacher should talk about the basic terms like line, line segment, point, etc. to recall the ideas learnt in the previous classes. Then, she should extend their knowledge about line segments and assist them in drawing and measuring the line segments using the ruler and the pencil. For text and exercise, she should go to pages 165–169.

- As the students learn geometry naturally by interacting with objects in their surroundings, so the teacher should show them several things in which angles can be observed. Then, she should go pages 169–170 for text and exercise.
- Also, she should introduce a few polygons like triangle, quadrilateral, pentagon, etc. Then, she should instruct them to do exercise 6.2.
- Further, the teacher should talk about circles and develop the idea for drawing it using different circular objects, a pencil, a string and a pair of compasses. Then, she should explain the terms related to the circle. Also, she can use Maths Lab Activity to give them better concept of diameter and radius. Finally, she should go to pages 172–175 for text and exercise.
- Students should enjoy by solving the problems given in Fun Zone and develop their thinking skills. Hence, the teacher should instruct them so that they can perform it well.
- Thereafter, the teacher should motivate them to solve the puzzle and to create their own designs.

## EXPECTED LEARNING OUTCOMES

Students are able to

- recognise the basic elements like point, line, line segment, etc., and can express them using symbols.
- identify the figures of closed and open curves, polygons, etc.
- measure and draw line segments using a ruler.
- read and understand the angles and their features.
- construct a circle using a pair of compasses and a pencil.
- understand the terms associated with circles.
- create the circular designs to decorate some items occasionally.

Finally, she may assess the students by using the materials given in Periodic Test–2 or by preparing a similar paper at the end of the semester.

## SUGGESTED ACTIVITY

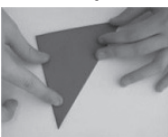
### **Origami Dog**

This is an origami animal. It looks beautiful on a greeting card with a bow under its chin, or it can be pasted on a wooden spoon to make a puppet. Students can even use a very large piece of paper to make a dog mask to wear.

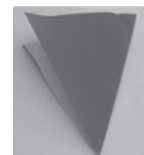
You need stick-on googly eyes and a black marker to draw the dog's features.

#### **Instructions:**

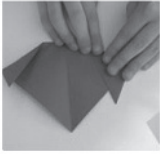
1. Start by folding a square in half diagonally, and creasing carefully.



2. Fold the triangle in half again to form a crease. Open it from the backside again.

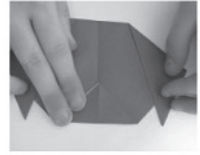


3. Now, turn the triangle so that the long side is at the top. Fold one of the corners down, as shown in the figure, to form an ear.



4. Do the same with the other corner. Try to make the ears even.

5. Now, fold the bottom point up, to form the dog's nose.



6. Finally, add dog's other features.