

Basic Geometry

SPECIFIC OBJECTIVES

The students will

- learn the basic terms associated with geometry.
- know different lines in a plane.
- learn about an angle.
- be able to use a protractor to measure an angle.
- be able to classify the angles on the basis of their measures.
- understand about supplementary/complementary angles.
- learn to construct an angle with the protractor.
- know the angle between two directions.
- learn to make and use a right-angled tester.

CONTENTS EXPLAINED INSIDE THE CHAPTER

- Plane and Lines (pages 125–126)
- Angles (pages 126–128)
- Measure of An Angle (pages 128–129)
- Types of Angles (page 129–132)
- Pair of Angles (pages 132–133)
- Construction of An Angle with the Protractor (pages 133–136)

TEACHING AIDS

Tracing paper, plain paper, a ruler, a pencil, a geometry box, matchsticks, broomsticks, etc.

TEACHING STRATEGY

- Since the students have become familiar with the terms point, ray, line, line segment, etc., in the previous class, the teacher should ask them to do questions of 'Let Us Recall' exercise to recall their knowledge.
- Next, the teacher should talk to them about the plane and lines in a plane. Again, she should discuss with them about an angle and explain how to express it using its symbol. For text and exercise to them she should go to pages 125–128.
- Further, she should explain, measure of an angle. She must clarify that length of arms does not affect the measure of an angle using broomsticks of different lengths but same opening.

- She should also discuss with them about the labelling of the protractor and then encourage them to use it to measure and construct an angle.
- After that, the teacher should explain to them about the types of angles according to their measures. For text and exercise, she should go to pages 128–132.
- Further, the teacher should develop their ideas of pair of angles, viz., supplementary and complementary angles.
- Henceforth, she should explain to them how to construct an angle with the help of the protractor. For text and exercise, she should go to pages 132–136.
- Now, the teacher should talk to them about geographical directions by paper folding and marking them as shown in Fun Zone. Then, she should ask them to answer the related questions.
- Finally, the teacher should motivate them to form a right-angled tester and use it to recognise different types of angles in the surroundings.

EXPECTED LEARNING OUTCOMES

Students are able to

- understand the concept of plane.
- recognise intersecting and parallel lines.
- identify an angle and name it using its arms and vertex.
- use a protractor to measure and construct an angle.
- classify the different angles.
- find out the supplement/complement of an angle.
- recognise the angles between two geographical directions.
- form and use a right-angled tester.

SUGGESTED ACTIVITY

If geometry is the bane of your fifth grader's existence, this simple fun activity will definitely change his outlook towards the subject.

Aim: To increase interest in the subject of geometry by performing a fun activity

Materials: A protractor, a ruler, a pair of compasses, markers, paper and a pencil

Instructions for Teacher:

- She should review angles with her students—acute, obtuse and right angles; triangles; rectangles, as well as parallel and perpendicular lines.
- Next, she should invite them to explore the house and spot examples of angles. For instance, they can look at door and windowframes, chair and table legs, hands of the clock, photoframes, etc.
- She should ask them to write down all examples on paper and use a pair of compasses or protractor to measure and note the angles and lengths of the examples.
- Now, she should give them a large sheet of paper and encourage them to use the right tools to draw different kinds of angles in an artistic manner.

