7 Symmetry and Patterns

LESSON PLAN

SPECIFIC OBJECTIVES

The students will

- be able to recognise the patterns in their surroundings.
- know the symmetric design in nature.
- be able to find out the line of symmetry of different geometrical shapes.
- understand the use of figure patterns in daily life.
- know the rules of number patterns and find the missing terms.

CONTENTS EXPLAINED INSIDE THE CHAPTER

- Symmetry (pages 147–148)
- Figure Pattern (pages 149–151)
- Number Patterns (pages 151–153)

TEACHING AIDS

- Flowers, leaves, feathers, cloths with designs, pictures of sceneries, tracing papers, pencils, etc.

TEACHING STRATEGY

- First, the teacher should talk about the designs made in windows grills, gates, walls, floors, etc., and patterns on the feathers of birds, body of animals, etc. Then, she should ask the students to do the task given on page 146.
- Then, the teacher should explain the symmetrical designs showing a few collections. She should also discuss about 'symmetric line' or 'line of symmetry'. She may familiarise the students with the symmetry of geometrical shapes through a paper folding activity.
- Divide the class into groups and provide them tracing papers and a pencil and ask them to sketch any geometrical shape on the paper and try to fold it into halves exactly.

- Thereafter, she should show the shapes that have equal halves that means symmetric along the crease. Then, she should go to pages 147–148 for text and exercise.
- Further, the teacher should talk about the designs printed on cloths, shawls, bedsheets, etc. Using repetition patterns, she can also ask them to create their own patterns with repetition. Now, she should go to pages 149–151 for text and exercise.
- After that, the teacher should explain the number patterns. She should talk about the properties of even and odd numbers. She may mix letters with numbers to make the patterns and then should go to pages 151–153 for text and exercise.
- The teacher should first write a few words or sentences on the blackboard using coded language and explain how to decode them. For example,

aT aE aA aC aH aE aR $\xrightarrow{\text{After removing 'a'}}$ Teacher

1R2E1S2P1E2C1T 1Y2O1U2R 1P2A1R2E1N2T1S

↓ Leaving the numbers

RESPECT Your Parents

- Finally, the teacher should ask the students to do Maths Lab Activity.

EXPECTED LEARNING OUTCOMES

Students are able to

- think about the natural patterns.
- identify a symmetric figure or shape.
- get the line of symmetry of the given figure.
- make a symmetry figure.
- understand and create the figure patterns.
- find out the rules behind the number patterns and extend them.
- know the coded language.
- apply the concepts of patterns in daily life.

After completing all the chapters, the teacher may use the Model Test Paper to assess the students or prepare another paper herself.