CHAPTER: Shapes and Spaces

Grade: **1**
Board: **CBSE**
Book: **NCERT**

1.

Chapter Summary and Placement

<Read through the following to understand how this chapter is connected with the previous and next grades and also the important concepts covered in it.>

1. This chapter introduces the students to the position of objects like Top-Bottom, On-Under, Inside-Outside, Above-Below, Near-Far and Before-After.

2. Knowledge of this chapter is very important in understanding how the space occupied by an object depends on its size and position.

2.

LEARNING OUTCOMES

<On completion of the chapter, students will be able to:>

1. Develop and use vocabulary of position words like top-bottom, on-under, inside-outside, above-below, near-far for various objects.
2. Classify, sort and describe the objects on the basis of different shapes.
3. Observe and describe the way shapes affect movements like rolling and sliding.

3. TEACHING PLAN

Follow this section for getting ideas on teaching the content covered in the chapter. The subtopic given in the first column with the matching learning outcome can be explained using instructions and resources listed subsequently

Subtopic and Learning Objective #1

Subtopic:
Inside-Outside
LO:
Develop and use vocabulary of position words like top-bottom, on-under, inside-outside, above-below, near-far for various objects.

1.To make the student identify positions inside and outside

Teacher Activity

Ask the students to clear their desk. Now ask them keep the pencil box on the desk. Ask them what's inside the pencil box and tell them to take out one pencil and keep it on the desk. Now explain the positions 'inside' and 'outside' in context of other items in the pencil box.

Check for understanding:

Read the Camel and the Arab story from the textbook and ask questions based on the story.

Activity 1 can be performed to make class visualize the positions inside-outside.

Resources Suggested

Blackboard, pen and paper

Activity 1

Name of the activity- Circle Time
Type of activity – Group
Use it for – Making the students understand positions inside-outside
Materials – A long stick
Procedure:
Instructions to the teacher

1. Take the class to the ground.
2. Make a big circle with the stick on the ground.
3. Ask 5 students to jump into the circle.
4. Now ask them how many are outside the circle?
5. Next, ask five students to keep just one leg inside the circle.
6. Now ask the students to count the number of legs inside the circle.
7. Next, ask five students to rest both their hands inside the circle.
8. Now ask the students to count the hands outside the circle.

Subtopic and Learning Objective #2

Sub topic: Bigger-Smaller
Biggest-smallest
LO: Classify, sort and describe the objects on the basis of different shapes.

1. To make student classify and describe the objects as bigger or smaller on the basis of their size.

2. To make student classify and describe the objects as biggest or smallest on the basis of their size.

Teacher Activity

1. Draw a small circle and a big circle on the board and ask students which one is bigger and which one is smaller. Repeat the same exercise by drawing two different sized squares and two different sized triangles.

2. Now add a bigger circle and a very small circle to the two circles drawn above and explain that the terms biggest and smallest are used if numbers of objects are more than two. Repeat the same exercise by drawing two different sized squares and two different sized triangles to the ones drawn above..

Check for understanding:

a. Which is bigger? Dog/Horse
b. Which is smaller? Grape/Orange
c. Which is smallest? Elephant/ant/mouse
d. Which is biggest? Watermelon/mango/lemon

Resources Suggested

Blackboard,chalk, pen and paper

Subtopic and Learning Objective #3

Sub topic: Nearer-farther
Nearest-farthest
LO:
Develop and use vocabulary of position words like top-bottom, on-under, inside-outside, above-below, near-far for various objects.

1.To make the student identify positions nearer and farther

Teacher Activity

1. Draw a circle on the board. Draw a star next the circle. Draw another star at the other end of the board. Explain the concept of nearer and farther with respect to the distance of the two stars from the circle. Repeat the exercise by drawing a tree and two clouds, one next to the tree and the other at a distance from the tree.

2. Draw two more stars at different distances from the circle above. Explain that the terms nearest and farthest are used when the number of objects is more than two. Repeat the exercise by drawing two more clouds at different distances from the tree.

Check for understanding:

a. Which is nearer? Classroom door/School gate
b. Which is farther? Teacher's table/ classroom's ceiling fan
c. Which is nearest? Bird in the sky/ sun/ Teacher's table/ classroom's ceiling fan
d. Which is farthest? Classroom door/your bedroom door/School gate

Resources Suggested

Blackboard,chalk, pen and paper

Subtopic and Learning Objective #3

Sub topic: On-under
Above-below
Near-far
Top-bottom

LO: Develop and use vocabulary of position words like top-bottom, on-under, inside-outside, above-below, near-far for various objects.

1. To make the student identify positions on and under
2. To make the student identify positions above and below
3. To make the student identify positions near and far
4. To make the student identify positions top and bottom

Teacher Activity

1. Ask the children to keep both their hands on their desks and keep both their feet under the desk. Explain the positions. Repeat by keeping different items from the pencil box on the desk, on the chair, under the desk, under the chair and explain.

2. Explain the position in context with sky. The sky is above us and we are below the sky. Repeat the same in context with the classroom ceiling.

3. Explain the position in context of distance of the shoulders from the elbow and the knees. Ask the children to measure with their hand span.

4. Draw three balls one over the other. Colour the top one green, middle one blue and bottom one yellow. Explain the positions. Draw another ball on the top and colour it white and draw a white line at the bottom. Discuss the new positions.

Check for understanding:

a. Use the picture given on page no. 9 in the textbook, formulate your questions and mark the positions:
   On-under
   Above-below
   Near-far
   Top-bottom

Resources Suggested

Blackboard,chalk, pen and paper

Subtopic and Learning Objective #4

Sub topic: Basic shapes around us

LO:
Classify, sort and describe the objects on the basis of different shapes.

1. To make the student understand and sort the objects around them on the basis of four basic shapes – round, triangular, rectangular and square.

Teacher Activity

1. Draw a triangle, a rectangle, a circle and square on the board. Now collect objects like a notebook, a pencil, a water bottle, a ball, a paper cone from around the classroom. Sort, classify and list the objects under the four shapes drawn on the board.

Check for understanding:

Write down the names of the following objects on the board:

balloon; tube light; duster; joker's cap; foot ball; chalk piece; ice cream cone and brick.

Ask the children to visualize the objects and make pairs of similar shapes.

Activity 2 can be performed to make the class classify and sort the objects on the basis of different shapes.

Resources Suggested

Blackboard,chalk, pen and paper

Activity 2

Name of the activity- Whatz the shape?
Type of activity – Individual
Use it for – classify and sort the objects on the basis of different shapes
Materials – Pen and paper and collection of small items
Procedure:
Instructions to the teacher:

1. Ask students to bring one object from home. You can give examples like: plate, ball, onion, battery cell, dice, lunch box, water bottle, funnel, apple, radish, etc. You should also have a collection of small objects which can be classified into four shapes taught above.
2. Draw the four shapes on four different sheets and ask four students to hold them and stand.
3. Make sure that each of the rest of the students has an object with them.
4. Now ask each student to come forward one by one, check the object they have against the four shapes and join the correct line.

Subtopic and Learning Objective #5

Sub topic: Rolling-sliding

LO:
Observe and describe the way shapes affect movements like rolling and sliding.

1. To make student understand how shapes affect movements like rolling and sliding.

Teacher Activity

Roll a coin on the table. Explain that when an object turns over and over again, we say it is rolling. All the round-shaped objects like coins, balls etc roll.

Now roll the pencil box on the table. When it doesn't roll, slide it across the table. Explain that the objects like boxes and books, that are not round in shape, slip on surface without rolling and are said to be sliding.

Check for understanding:
Read the Wise grandmother story from the textbook and ask questions based on the story. Ask the children what would have happened if the dholak in the story was replaced with a box.

Resources Suggested

Blackboard,chalk, pen and paper

4. WORKSHEETS

Print or copy the worksheet questions on the blackboard and ask the students to attempt them. They can be given as homework or a class test as well.

Worksheet 1

Use it like: test after the chapter is complete, homework

If it is inside colour the box red. If it is outside, colour the box green.



Worksheet 2

Use it like: test after the chapter is complete, homework

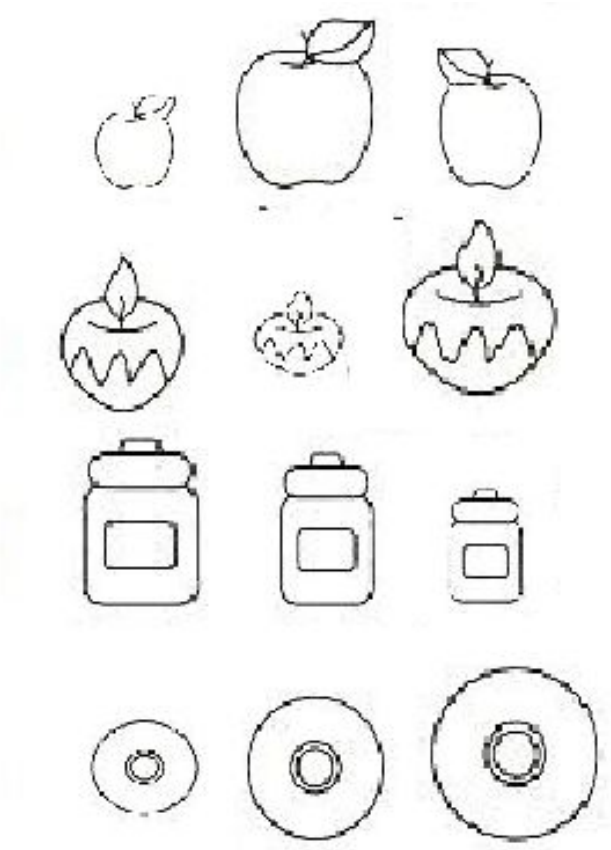
Colour the one which is bigger and circle the one which is smaller



Worksheet 3

Use it like: classwork, homework, test

Colour the smallest and circle the biggest



Worksheet 4

Use it like: classwork, homework, test

Draw 2 birds above the boat, 2 fish below the boat, 2 ducks on the water





Worksheet 4

Use it like: classwork, homework, test

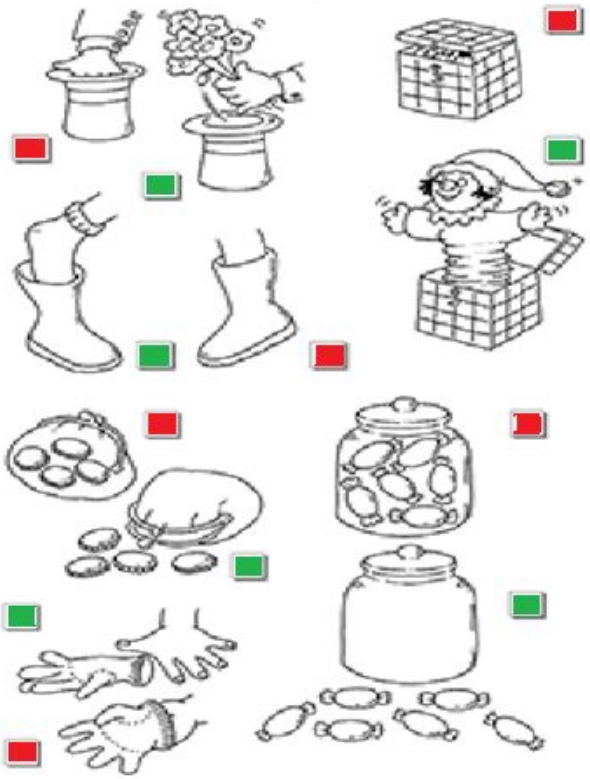
In the given picture, colour the triangles blue, the stars orange, the squares yellow, the circles red, the rectangles green and other shapes brown.



5. SOLUTIONS

This section gives you sample answers for activities and questions listed above.

Worksheet 1



Worksheet 2



Worksheet 3



6. EXTRA RESOURCES

Carry out the following suggested activities/ tasks if you have the time and resources to do them

Teacher can use these videos if time and facilities permit:

https://www.youtube.com/watch?v=Z0QSEMvGU2k Inside-Outside
https://www.youtube.com/watch?v=Rom_UyBaTGM Bigger-Smaller
https://www.youtube.com/watch?v=YYIS25-690Y near-far
https://www.youtube.com/watch?v=4YuP6ySZYvk On-under
https://www.youtube.com/watch?v=Q87M0fh6s_Q Basic shapes around us
https://www.youtube.com/watch?v=vlfWvI1oO7Y Rolling-sliding