Vision Empower & XRCVC

Teacher Instruction KIT

Solids around us

Syllabus: Karnataka State Board
Subject: Mathematics
Grade: 1
Textbook Name: of Karnataka Mathematics Text cum Workbook(Revised)
Chapter Number & Name: 2. Solids Around Us

1. OVERVIEW

1.1 OBJECTIVE & PREREQUISITE

Objective

- To sort and classify objects based on their shapes.
- To observe and explain how the shapes affect the movement of objects like rolling and sliding.
- Identify two dimension flat objects with shapes such as square, triangle, rectangle and circle.
- To draw free hand figures of triangles, rectangles, squares and circles.

Prerequisite Concept

- Spatial understanding

Content Index

*Kindly Note: Activities marked with * are mandatory*

3.3 LET'S DISCUSS: RELATE TO DAILY LIFE*

Activity 6: Shape Scavenger Hunt*

4. EXERCISES & REINFORCEMENT

4.1 Reinforcement activities for children

To check for understanding about shapes

Activity 7: More Shape Pictures*

IMPORTANT GUIDELINES*

Exercise Reading

Perform Textbook Activity

Provide Homework

2. LEARN

2.1 KEY POINTS

1. A circle is a shape with 1 single continuous side and no corners.
2. A triangle is a shape that has 3 sides and 3 corners.
3. A square has 4 equal sides and 4 corners.
4. A rectangle has 4 sides and 4 angles, but only opposite sides are equal.

2.2 LEARN MORE

NONE

3. ENGAGE

3.1 INTEREST GENERATION ACTIVITY

Activity 1: The Shapes Rhyme*

Materials Required: None

Prerequisites*:* names of basic shapes

Activity Flow

Read out / sing / play the following song to the children:

"Shapes shapes everywhere
Shapes shapes everywhere
shapes are very useful.
A handkerchief is square square square
Table tops are rectangles,

Rooftops are triangles
Wheels of the bus are circles."

Discuss the properties of shapes with the children using the examples in the song. Does a table top (or desktop) have sides and corners? What about wheels? How many sides and corners does each of the shapes have?

3.2 CONCEPT INTRODUCTION ACTIVITIES

Sorting Shapes

Activity 2: Tangrams (Sorting Shapes)*

Materials Required: Magnetic shapes set.

Prerequisites: None

Activity Flow

First, set out the bag/box of shapes in front of the children and allow them to explore.
Ask children some leading questions: are all of these shapes the same or are they different?
Which ones are different? Can you find 2 shapes of the same kind?
Now, divide the board into 4 quarters using tape that has an easily identifiable texture.
Give the children a bag of shapes containing only squares, triangles, rectangles and circles.
Ask them to stick similar shapes together on the board. Each kind of shape should be in a different area of the board.
Finally, when the children are done sorting, ask them how these shapes differ from each other and provide them the names for the shapes.

Concept of Rolling and Sliding

Activity 3: Rolling and Sliding*

Materials Required: Objects that roll and slide

Prerequisites: None

Activity Flow

First, demonstrate to the children what rolling and sliding look like.
Have children stand on either side of a desk and roll a ball to each other. Now ask them to slide an object to each other (such as a braille slate, a book, a flat box).
Ask the children to repeat these actions slowly and follow the objects with their hand as they roll and slide.
Discuss with the children the difference between these actions.
Now, ask the children to find objects in the environment that are:
Round and rolls: for example, balls, oranges, tomatoes, door knobs, marbles, gum balls. (sphere)
Square, slides & stacks: for example, dice, wooden blocks, sugar cubes, ice cubes, boxes. (cube)
Round, rolls but not straight, and has one point: for example, ice cream cones, birthday hats, funnels. (cone)

Round with flat ends, rolls straight and stacks: for example, paper rolls,(pencils, straws, crayons) cans. (cylindrical).
Have children sort objects into groups according to the attributes listed above.

Shape Identification

Activity 4: Shape Pictures (Shape Identifications) *

Materials Required: Magnetic shapes set.

Prerequisites: None

Activity Flow

Distribute the shape sets to the children. As in the previous activity, make sure that the set contains only circles, rectangles, squares and triangles.
Encourage the children to make different pictures with the shapes. Can they make a house? What about a car or a bus? What else can they make?
Now, ramp up the challenge by asking children to make pictures using specific shapes. Can they make a picture using only squares and triangles? What about rectangles and circles?
Observe whether the children are able to identify the shapes correctly.

Activity 5: Free Hand Drawing*

Materials Required: Rubber board, parchment paper cut into the size of the rubber board, stylus

Prerequisites: Shape identification

Activity Flow

Provide a brief recap of all the shapes the children have learnt so far. Do the children remember what they look like?
Now distribute the rubber board, paper pins, parchment paper, stylus, and example shapes to each child.
Now, encourage the child to get familiarized with the drawing equipment (if they are seeing these for the first time). Help the children to pin the paper onto the board.
Ask them to place a shape on top of the drawing board and paper, and draw around it to create a replica of the shape.
Provide the children ample time to get used to doing this.
Once the children are familiarized with the process, ask them to draw similar shapes on paper without tracing.

3.3 LET'S DISCUSS: RELATE TO DAILY LIFE*

Activity 6: Shape Scavenger Hunt*

Materials Required: Some shapes, daily life objects that are square, rectangle, triangle and circle.

Prerequisites: Shape identification

Activity Flow

The world is full of shapes. Encourage the children to use their current understanding of shapes to figure out what shape things are. Give examples and encourage children to give their own.

Now, distribute 1 shape to each child.

Let the child know that they have 10 minutes to find real-life objects that are of the same shape as the shape the child now has.

Start the scavenger hunt and put on the timer.

The child who brings back the most number of shapes within the designated time wins the game.

4. EXERCISES & REINFORCEMENT

4.1 Reinforcement activities for children

To check for understanding about shapes

Activity 7: More Shape Pictures*

Materials Required: A geo board

Prerequisites: Shape identification

Activity Flow

Distribute the geo boards to the children.

Encourage the children to draw on the geo board.

Draw different shapes on the geo board.

Do the children remember the names for these shapes? How are they different from one another? Recap the concepts studied in previous classes.

Teaching Tips:

If there are any additional teaching tips then utilize this section to mention them.

References:

NONE

IMPORTANT GUIDELINES*

Exercise Reading

It is very important that the children practice their learnings as well as their Reading. Hence have the children read out the newly learned concepts from their textbooks or other available resources.

Perform Textbook Activity

It is good practice to have the children perform the textbook activities. Your textbook activities might not be accessible hence go through this resource to learn how to make textbook content accessible

Provide Homework

To evaluate their understanding and to help the student revise and implement the new learnt concept ensure to provide them with homework. Students should perform one or two of the questions mentioned above or from the textbook exercises with the teacher in Class and the remaining may be given for homework. Also, ensure that the student knows their special skills linked to independently using their accessible books as it will be critical to doing homework independently

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