

GEOMETRY CABINET

Materials

A wooden cabinet with six drawers containing thirty three geometric insets with knobs in wooden frames with the bottoms of the drawers painted the same color as the insets.

Drawer 1

Acute angled isosceles triangle, right angled isosceles triangle, obtuse angled isosceles triangle, acute angled scalene triangle, right angled scalene triangle, obtuse angled scalene triangle, equilateral triangle

Drawer 2

A square and five rectangles, the bases vary from 10 cms to 5 cms while the height remains constant.

Drawer 3

Pentagon, hexagon, heptagon, Octagon, nonagon, decagon

Drawer 4

Six circles decreasing in diameter from 10 centimeter to 5 centimeter

Drawer 5

Curvilinear triangles, quarter foil, oval, ellipse

Drawer 6

Rhombus, parallelogram, isosceles trapezium, right angle trapezium

Demonstration tray

On the top of the cabinet is a demonstration tray with a removable grid top and equilateral triangle, square, circle and three blank wooden squares

Geometric form cards

Three series of cards that correspond to the insets

Series one – figures are filled in

Series two- figures have a thick outline

Series three- figures have a thin outline

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Aim

Direct aim – discrimination of shape preparation for mathematics

Indirect aim - preparation for writing

How to feel and hold the insect

Hold the insert by the knob of the insect with 3 fingers. Feel it along the edge of the figure in one single smooth motion stop exactly where you started.

Note – while feeling a triangle we passed slightly in the corners and go on in one single motion

How to feel a frame

With two fingers of the left hand we feel around the edge of the shape in one single movement, navigating the corners deliberately for the child to see.

Introduction

1. Pick up a shape
2. Feel the inset a couple of times and place it in the blank
3. Feel the sides of the frame with two fingers
4. Superimpose the inset, position it and place it accurately in the frame

Presentation

- a) Take out all three insets and place it randomly on the table
- b) Pick one inset and look for the corresponding frame
- c) Once found, feel the frame, and position it and place it accurately in the frame at one go
- d) Do the same for the other two insets as well
- e) Then, take the insets place it randomly again and invite the child to work with the material

Exercise 1 – child's own activity

EXERCISE 2- Childs work with the six shapes

EXCERCISE 3 – the child can take any one draw feel all the shapes and put it back

Exercise 4 – two trays together or more drawers together

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EXCERCISE 5 – find the inset

Introduce the card, keep it facing down in a pile, pick one card from the pile and place it on the table and ask the child to find an inset that matches the card. Superimpose the inset over the card, see that it fits, and then set it aside, do the same until the child is interested or find the insets for all the cards.

Exercise 6 – find the card

roll out two mats, ask the child to remove the insets and place it on the mat, the cards will be on another mat, bring the child to the mat and ask them to get a shape and match with the geometrical form cards. Check one by one if it matches place it on the top right corner. Do the same for all the shapes.

Exercise 7- work in the same way as exercise 5 and 6 with cards of series two and three

Control of error- the cards, visual sense and the perception of the child

Cabinet – the material

Language- names of the shapes were means of three period lessons

Game 1 – layout three mats in different corners of the room. Lay the three sets of cards on each mat respectively. Invite three children, isolate a insert and ask each of the children to bring three cards that match the given inset After bringing it place it on the mat in a line one below the other. Check with the inset and see if it matches. If yes stack the cards in a pile and place the inset on it. Do the same with all the insects, and do this as long as the children are interested at some point we can go away and let the children continue with the game. Ensure that each child gets a turn

Game two - find a card for the insets

Follow the same setup as in Game 1

Hide a card name the shape that is missing.

Mix three series of cards and place them on three mats and shuffle them, the child finds the card for the give an inset. When they find out that the card is missing, show it to them and ask them if this is it and name the card.

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Game 3- roll out three mats and place each set of cards on the Mats respectively. Isolate one card and ask the child to search for the other two cards. Tell them will you find and the children will find it.

ILLUSTRATIONS