

Side-Sum

Author: Hepziba, TELC Middle School for the Visually Impaired, Tirupattur-630211, Sivagangai Dist.

School Overview:

- Our school has a total of 30 students (20 boys, 10 girls) from class 1 to class 8. Among them, 16 students are totally blind and 14 students are partially sighted.

-**CT Games:** In our school, we play CT (Computational Thinking) games once a week through Vision Empower. The side sum game, played using circles and numbers, is particularly useful. Through this game, students learn addition, subtraction, finding the missing number, and the sequence of numbers. It is sufficient for students to have a basic understanding of numbers, addition, and subtraction to play the addition game. The objective of this game is to develop the skills to solve mathematical puzzles in a simple way.

Objective:

To instil **Algorithm and Pattern Recognition** skills in children through the game.

Materials Required:

- Bowls
- Raised numbers (shot or coins)
- Pebbles
- Cardboard
- Yarn
- A sideboard with 6 to 10 rings

Game Description:

Example:

1. First, take three bowls. Place these three bowls in a triangle shape. Fill all three bowls with number coins as given below. Ask the students to find the structure in it. Students add the

numbers from the two bowls and say that the sum is in the third bowl. This helps visually impaired students understand the game.

2. Introduce the game by making the students add the numbers.

Status:

- **Level:** Easy; the next levels will be a little harder. The game can be played according to the standard of the students.

First Stage:

- Again, fill three bowls with numbers and ask the students to take the number from one of the bowls and find the missing number.

Game Mechanics:

- The sum of the numbers on the right side, the sum of the numbers on the left side, and the sum of the numbers on the horizontal should be equal to the three sides of the triangle.
- Shoot numbers from 1 to 6 as per their choice.

Example:

- We made a stitchable picture with 6 rings in a triangular shape using thread on the card. The adjacent sum is 12.

Level 3:

- Once students know how to play this game, they find the missing numbers, which improves their thinking skills.
- Students find the sum of numbers next to the students with the help of the teacher or the Vision Empower Coordinator to identify the current difficulties faced by the students.
- Different ways to find numbers for struggling students.
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Impact

- Most of the students found the adjacent sum of different numbers in less time.
- They learn more easily through play rather than traditional learning methods.
- Mathematics, previously feared and disliked, becomes an enjoyable subject.

- Students develop computational thinking skills by solving puzzles, finding missing numbers, and recognizing patterns.
- Students are highly motivated and respond well when they see other students participating.
- Each student competes to find the sum number next to the pot.
- The game can be made harder by using larger numbers or finding any number and identifying the missing number.
- The fear of mathematics is replaced with enthusiasm.
- Students become skilled in solving mathematical puzzles and mental arithmetic.

