

# Teaching Pattern in Grade 2

**Socio economic context :** Most of the students come from very poor families.

**Peculiar strengths and challenges:** Multi grade class (Vadamattam School and Keezhaoduthurai School) I and II, III and IV and V

**Some key areas of interest :** Puppetry, Villupattu, Drama, Digital resource creations, Music

**Why I was interested in joining the teachers' circle:** Self -Development through exchange of ideas from various school teachers.

**Summary of the different things I did last year :** Puppet show, Villupattu, Digital resource creations, Lesson plan creation. Puppetry helped them learn concepts in a joyful manner and encouraged them to be more creative in class.



C. SASIKUMAR  
G.M.S, Manapet

Previous School :  
G.M.S, Vadamattam.

Student strength – 114  
Teacher strength – 7



N. RAJAM  
G.P.S, Moorthykuppam.

Previous School :  
G.P.S. Keezha oduthurai

Student strength – 18  
Teacher strength – 2

# Experience Sharing

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## Purpose :

The students in the II std found the concept pattern a bit tough. They were familiar with some patterns but they were not able to connect it with their subjects. Pattern is an essential aspect of mathematics. Indeed some have argued that mathematics is all about the study of pattern (Orton 2005; Devlin 2005). When students are doing and creating patterns, it helps students to develop reasoning skills (Montague-Smith & Price 2012). When students solve problem in patterns or create their own patterns they should explain a few things.

- What is the pattern? How are they related to each other?
- How are they repeated and in which way are they repeated or symmetric?

## How I planned to work on this objective :

Initially I taught the students patterns with writing activities. They felt bored and did not concentrate in the class. So I planned to prepare a lesson plan with activities and give them hands on experience with concrete materials.

## Summary of teaching and assessment approach -

Below is the summary of the activities that were done to teach children patterns. I have categorized the activities into broad themes.

### Patterns in games we play

- Students play the game sit and stand.
- Pyramid making activity with numbers
- Activity and Worksheet

### Patterns in arts & craft

- Paper folding and cutting activity
- Colouring the shapes

### Patterns in nature

- Patterns in objects/natural things (With leaves, ice cream sticks, beads, blocks, etc.)
- Patterns in nature (Leaf, flower, feathers, etc.)
- Thumb/finger impression

## Pattern in other categories

- Videos
- Kaleidoscope

## Patterns in the games we play

### Sit/Stand Game

I divided the class into 2 groups. I gave instructions to one group to sit while the other group stood as per my command. The 2 groups were made to stand alternatively. When the command was given sit, one group of children who were instructed to sit will sit and the other group will stand by seeing the boy adjacent to him. This game created a wavy pattern.



*Children make repeated pattern by sitting and standing alternatively*

Students enjoyed playing this game. They made sssshhhh sounds while playing this game and they asked me to conduct this every day. Similarly the students enjoyed playing the rhythmic clapping game (1,2,3. 1,2,3. 1...2....3...). Here also they learned the pattern.

## Patterns in art and craft

### i) Paper fold cutting - symmetric Pattern

There were difficulties for students to fold the paper and I helped them whenever they found it difficult to do so. After opening the paper they were amused to see the patterns that they had cut and made. One student started counting the diamond shapes and he said he had 4 diamonds then other students started to count their shapes and told the number of diamonds they had. They saw the images (shapes) after the opening the paper, they said the same shapes were present in alternate places. From there I told them this is one kind of pattern.



*Craft work to help students understand symmetric pattern*

### ii) Draw and Colour

I drew some shapes like (circle, triangle, square and rectangle) and asked them to tell the name of the shapes, everyone knew circle and triangle. They drew the shapes



*Students themselves drew patterns in notebook – which was repeated pattern*

and coloured them in alternate colours for the alternate shapes.

## Patterns in Nature :

### i) Leaves Pattern

Initially they were trying to form a pile of leaves and then I showed them a pattern with the leaves. One student started to form a pattern with leaves front and back and another student up and down. They continued to form different patterns with the leaves. They started making their own pattern. They are learning Rotational/Inverse pattern with the help of leaves. We can give different leaves to form a heterogeneous pattern. One student started forming the pattern up and down in alternate ways, whereas another student formed a pattern by rotating it (45 degree) which shows that they have an idea that we can form different patterns by arranging in different ways alternatively which are repeated patterns.



*The above pictures shows there two different types of pattern, one is upside down another one is flipped alternatively.*

### ii) Thumb impression

One student framed a pattern like 5's then others started forming patterns like 2's and 3's using their thumbs dipping their fingers in ink. One student came with an upside down pattern. The group repeated what



*Children thumb printing- each one create their own pattern*

the student did. I told the students that the ink will take a day to wash, so they were a little worried. After washing their hands they smilingly showed me that the ink stain had gone

With the thumb impression we can create some images of animals. First the class started by creating animal pictures using their thumb. Then they were very much interested to form other images and showed it to me with joy. Then I continued with the pattern making. They initially had some struggle, they were keeping the thumb impression in a circle then I started giving them some examples with the thumb impression. Then they were happily involved in making their own patterns in increasing order, up and down. Couple of students used all the fingers to form a pattern.

### iii) Pattern with sticks/bead

Since they were only 6 students that day. I divided the class into 3 groups and asked

them to form patterns with them. They formed various patterns but they started fighting for more beads/sticks/bells. So I gave each student a set of beads/sticks/bells. Now the students started forming the pattern with beads based on colours. They started forming a group with some pattern. The others started to imitate the others' work. So it's sometimes better to keep them single than in groups.

### Kaleidoscope

They started telling it's like a flower, diamond, also started drawing in the air with the pattern they have seen in the Kaleidoscope.

### Reflections:

- The students enjoyed the activities, they were expecting new activities everyday.
- I asked them to try the book exercises, all the students were very familiar with the colour and shape pattern.
- Now I have to give more activity for number pattern.
- We see many natural and artificial patterns in our day-to-day life. Like our heart beat is a pattern, we breathe with a pattern, shirts with pattern, in fruit shops the fruits are arranged in pattern, chess board, tiles, maths table, flowers, leaves, etc.

What are the patterns we see in our day-to-day life? They were talking about the patterns in shirts, the desks arranged in their class, flowers, etc. Then I continued that discussion and asked my students, "Why do you say these are pattern? They said "there are similarities on the other side also." Benches are arranged that side also and same way this side also and the flowers are look similar when arranged even if we cut them in any direction they will look same they replied. These are called symmetric pattern

Don't expect them to learn as you teach, it will take some time for the slow learners to catch up. Every student is unique, some like games and activities very much, some like coloring activities and some like activities with beads and sticks. So it's our duty to give more activities in a way that students can learn the concept with ease. There are activities in which students may not show interest. Those activities can be replaced or modified as per the wish of the student. First give them enough explanation of the activity and then ask them to do it on their own. We may think certain activity is easy and that everyone can do. But in our class there were students who didn't understand that concept or activity.



*Student use stick and beads to create pattern – both try different patterns using the same materials*



*Kaleidoscope activity to describe pattern what they see in it.*

**Way forward:**

The students were able to learn Pattern very easily when taught using objects. But when they saw the numbers, alphabets they were finding it difficult to understand. To overcome this problem, initially the students should be made familiar with numbers and alphabets. We need to give more concentration to the slow learners to understand the concept in depth.