

## Number Patterns

Grade Level: 3-5

**Objective** By the end of the lesson, children should have solid understanding of basic numbers and understand that numbers can be represented in different ways. Specifically, students will learn about sets, will be able to practice writing numbers, and will go through a process of discovery. This should first be an oral lesson, it can then be repeated as a written lesson.

**Teaching method and activities:** Full class participation; discovery

1. Check that the children can count from 1 to 25 in the language you are using. Practice having the class count 1 through 25 two or three times.
2. Have the whole class stand up. Ask them basic questions and have them answer all together orally:
  - How many hands do you have?
  - How many fingers do you have?
  - How many fingers do you have...on one hand?

Make sure that no student remains silent.

3. Now ask questions and have the students answer by showing rather than speaking:
  - Show me something you have two of.
  - Show me something you have only one of.
  - Show me something you have five of.
4. Ask the children how many ears one person has. After everyone agrees that each person has two ears, bring students to a particular area of the learning space (the front or the side) one by one, and as they move to the area, ask the students how many ears there are, total. If they know how to read and write numbers on the board, write:  
Person 1 2 3 4 5 etc. # Ears 2 4 6 8 10 etc. Repeat this for items in groups of fives, tens, and any other pattern.
5. Take a short break.
6. Ask the class:
  - How can I get 6 eyes?
  - How can I get 25 fingers?
7. Then the questions can become more difficult:
  - How can I get 7 eyes?
  - How can I get 9 hands?
8. As the class becomes more advanced, ask them how they can make a number in different ways, and ask how many different ways they can think of. Some examples:
  - They can get 7 eyes by getting seven people with one eye covered each or by getting 3 people with two eyes and one person with 1 eye covered.

- They can get 8 fingers with four people showing 2 fingers each.

**Time** 30-40 minutes

**Materials** You do not need any specific materials for this lesson. However, you may want to write on the board (with a board and chalk) or mark a space for students to stand in for item 4.

**Activity** This is a continuation of the idea that numbers have patterns.

### **The Lesson**

1. Tell the class to call off the numbers as usual...1, 2, 3, 4, 5, 6, 7,.....
2. Then you should form a double line: 1 and 2 3 and 4 5 and 6 7 and 8, etc.....
3. Introduce the word 'pair' and explain that these are pairs. Ask the question: How many pupils in each pair?
4. The number on the left is called ODD number. The number on the right is called and EVEN number. Lead the class to realize that an EVEN number is one more or one less than an odd number.
5. Can two even numbers follow each other? How do we recognize even and odd numbers? Even numbers will always end in....? Odd numbers will always end in...?
6. Where do we see even and odd? One answer: The pages of a book where the even numbers is always on the right

**The Teaching Method** This is a simple lesson teaching ONE THING and relating it to other things in life

**Remember!** Something which now seems simple to you like even and odd numbers is something which your teacher also took time to teach you. If you teach the simple things well, the difficult things will soon fall into place.

### **SUGGESTIONS/MODIFICATIONS**

- Students may write down their answers to the oral questions in order to practice writing.
- Students may make a number list and use differently colored pencils or crayons in order to mark the even and odd numbers. Students may make a calendar and mark the even and odd days accordingly; the teacher may make signs marking even and odd numbers for the class The specific target is: even numbers and odd numbers. For this lesson you will need a book to show the even and odd numbers.

**Source:** The Spark handbook: A guide in Zambia's community schools. Zambia: UNICEF

