

**N**ational  
**I**nitiative for  
**P**roficiency in Reading with  
**U**nderstanding and  
**N**umeracy  
**NIPUN BHARAT**

(A National Mission on Foundational Literacy and Numeracy)



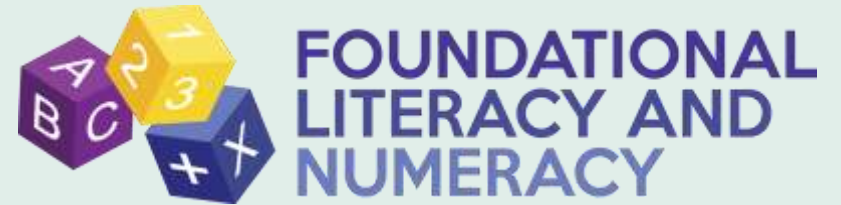
**BBPS ROHINI**  
**Saturday, 04 February 2023**  
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# Introduction

The highest priority for the school education system is to achieve universal acquisition of foundational literacy and numeracy skills at primary level by 2026-27. The National Education Policy (NEP) 2020 also highlights that a large proportion of students currently in elementary level, have not achieved foundational literacy and numeracy. The NEP, 2020, further reiterates that it is imperative to address this crisis head on and immediately so that basic learning can be accomplished in schools, and all students may thereby gain the opportunity to obtain an education of quality.

A National Mission on Foundational Literacy and Numeracy called “National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat)” has been set up by the Ministry of Education (MoE). The National Mission lays down priorities and actionable agendas for States/UTs to achieve the goal of proficiency in foundational literacy and numeracy for every child by the end of Grade 3.

# WHY FOUNDATIONAL LITERACY AND NUMERACY (FLN)



- **Foundational learning is the basis of all future learning for a child. Not achieving basic foundational skills of being able to read with comprehension, writing and doing basic mathematics operations, leaves the child unprepared for the complexities of the curriculum beyond grade 3**
- **The Mission will focus on following areas– providing access and retaining children in foundational years of schooling, teacher capacity building, development of high quality and diversified Student and Teacher Resources/Learning Materials, and tracking the progress of each child in achieving learning outcomes of children.**
- **The vision of the Mission is to create an enabling environment to ensure universal acquisition of foundational literacy and numeracy, so that every child achieves the desired learning competencies in reading, writing and numeracy at the end of Grade III.**

# WHAT ARE FLN SKILLS?

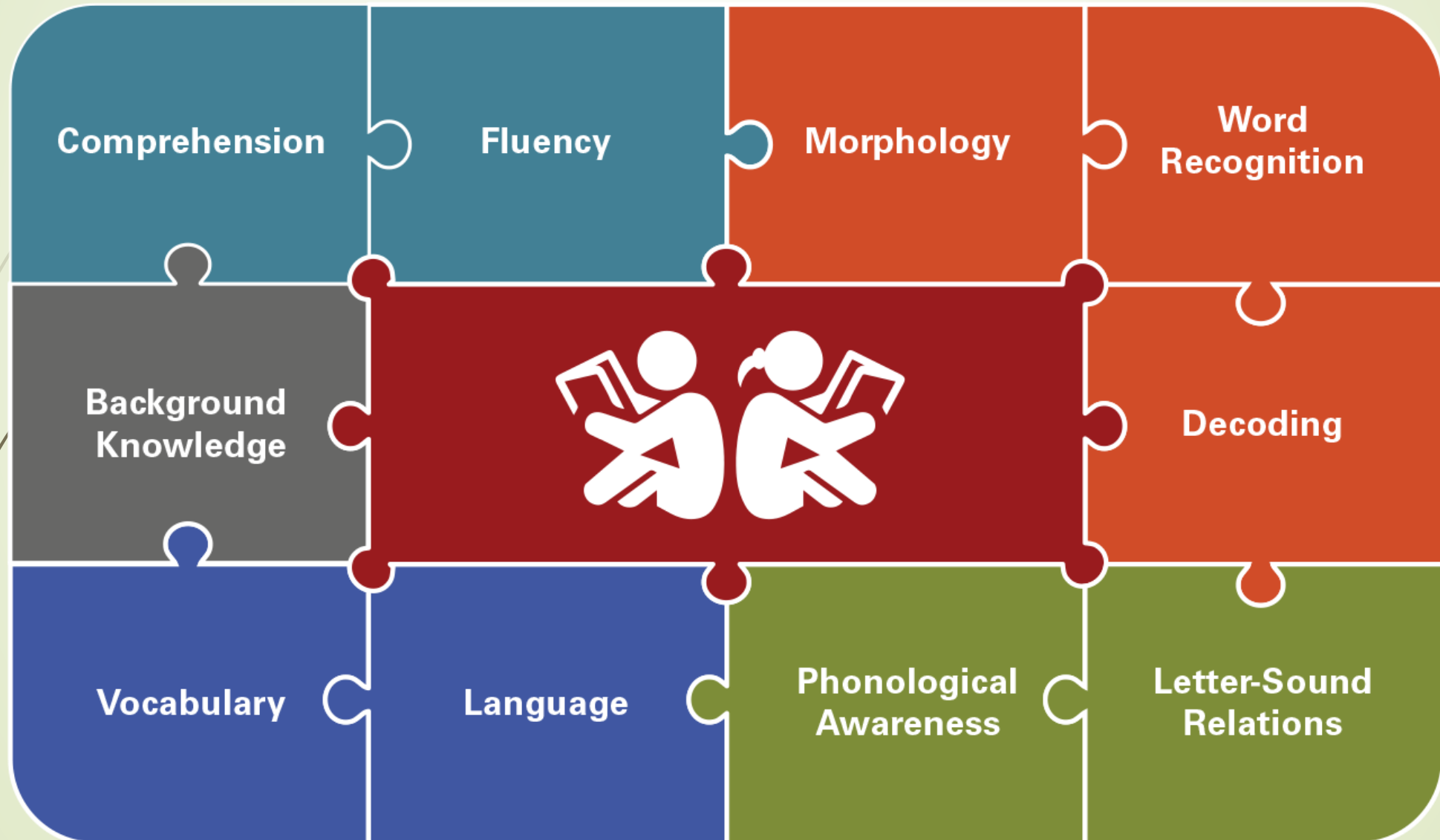
## ➔ Foundational Language and Literacy:

Oral language development in home language; appropriate exposure to the school language including good listening comprehension skills, development of print and phonological awareness and development of emergent reading and writing skills in the preschool years are crucial for language and literacy development in early primary school years. The pre-existing knowledge of language helps in building literacy skills in languages. Children who have a strong foundation in their home language can learn English/second language more easily.

### **Foundational Literacy:**

- Identify letters, and identify initial or final words
- Read familiar words
- Listen with comprehension
- Orally read, with fluency and comprehension

# KEY COMPONENTS IN FOUNDATIONAL LANGUAGE & LITERACY



# Academic approaches to improve FLN

## Teaching Learning: Focus on Learning of the Child

- 1) Demonstrate equal and appropriate expectations from boys and girls by providing equal attention, respect, and equal learning opportunities.**
- 2) Select books, pictures, posters, toys/materials and other activities free of gender bias.**
- 3) Not use gender biased statements while talking to the learners or giving instructions in the classrooms.**
- 4) Select such stories, rhymes/songs, activities and facilitation aids that depict girls and boys, including some with special needs, in the same roles as men and women in all professions.**
- 5) Encourage learners to follow their interest that enables them to develop skills of self regulation, perseverance on task and good work habits.**
- 6) Use toy-based pedagogy and experiential learning.**

# Key Components in Foundational Language

## and Literacy:



**Oral Language Development**- Includes improved listening comprehension, oral vocabulary, and extended conversation skills.



**Reading Comprehension**- Involves constructing meaning from a text and thinking critically about it.

**Concept about Print**- Children need exposure to different types of print rich environment to develop the skill of comprehension.

**Writing**- Involves the ability to express themselves in writing in initial stages with their familiarity and understanding encoded sounds to write words.



**Vocabulary**- Developing knowledge of a wide range of words and word meanings.



**Phonological Awareness**- This domain includes the competencies of word awareness, rhyme awareness, and awareness of sounds within words which should emerge from their meaningful engagement with language.



**Decoding**- includes competencies of print awareness, akshara knowledge and decoding, and word recognition.



**Reading Fluency**- Refers to the ability to read a text with accuracy, speed (automaticity), expression (prosody), and comprehension



**Culture of Reading / Inclination towards Reading**- Involves the motivation to engage with a wide variety of books and other reading materials.



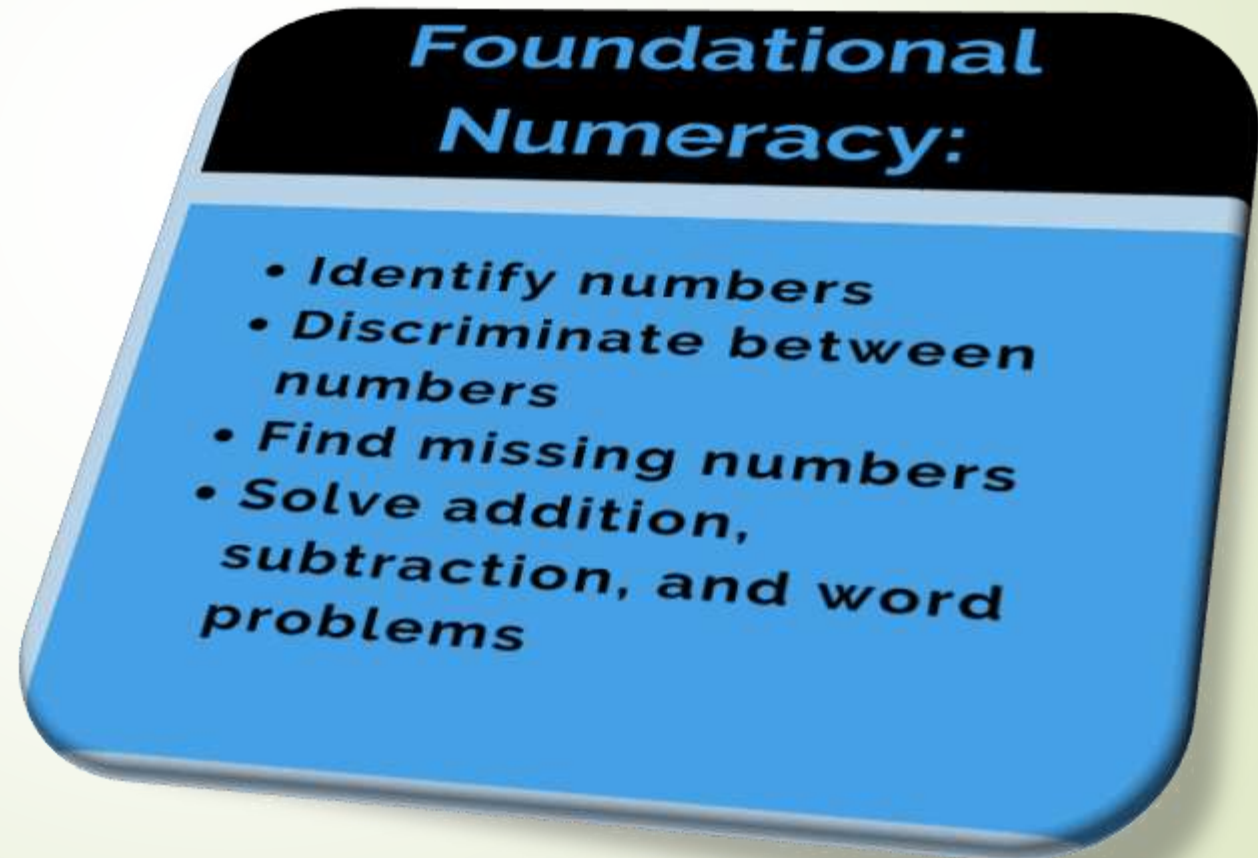


# **Pedagogies for Enhancing Language and Literacy Development**

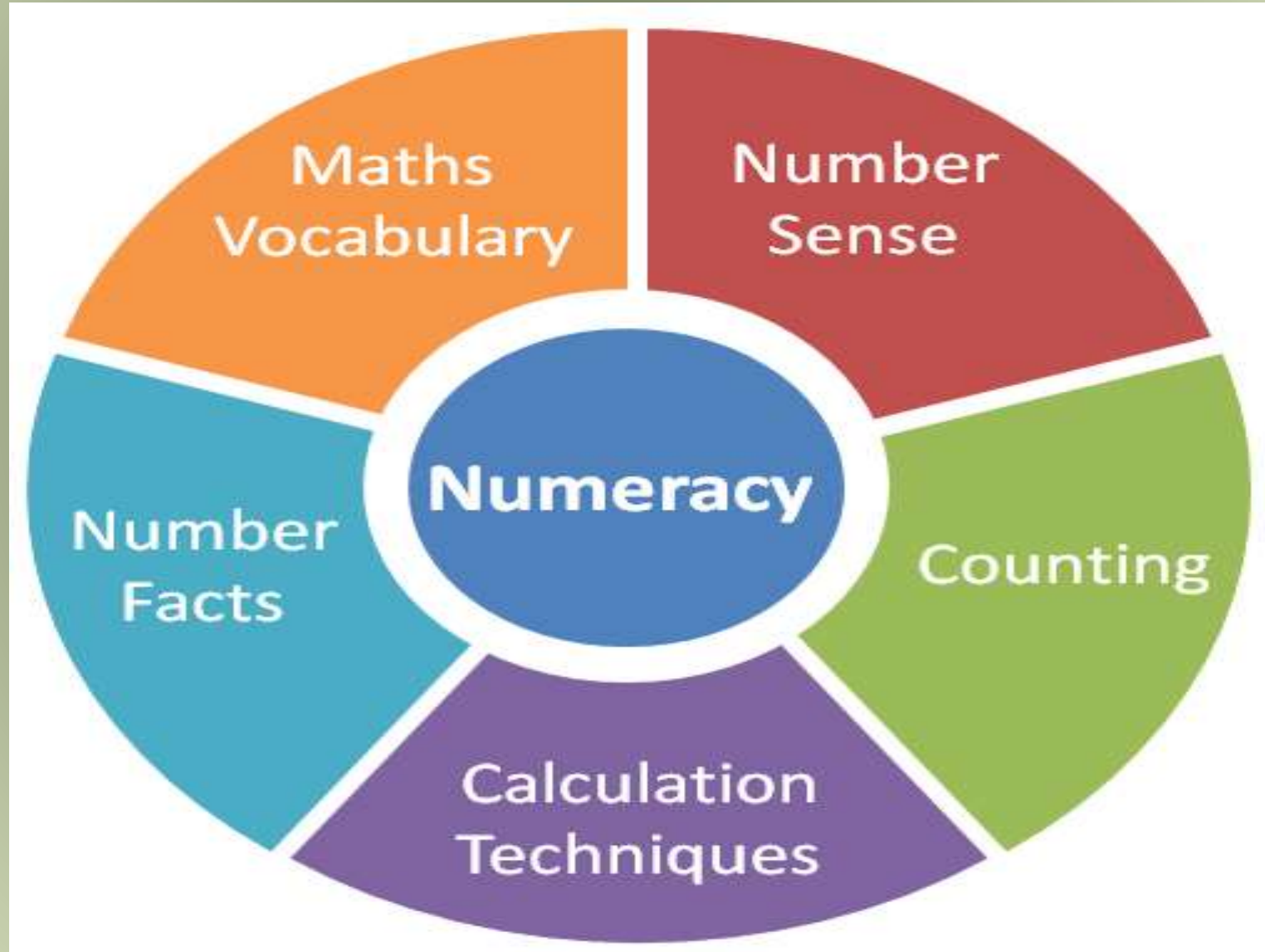
- **Creating a Print Rich Environment**
- **Read-aloud**
- **Listening, Telling and Writing Stories and Poems**
- **Songs and Rhymes**
- **Sharing Experiences**
- **Drama and Role Play**
- **Picture Reading/Talk**
- **Shared Reading**
- **Activities based on Reading and Writing Corners**
- **Use of Classroom Wall**
- **Experience Based Writing**
- **Use of Textbook and other Resource Materials**

# Foundational Numeracy and Mathematics Skills

- Foundational Numeracy means the ability to reason and to apply simple numerical concepts in daily life problem solving. The development of pre-number and number concepts, knowledge and skills of comparing, seriation, classification and recognizing patterns during pre-school serves as a foundation for mathematics learning in early primary classes.



# KEY COMPONENTS IN FOUNDATIONAL NUMERACY



# Need of Early Mathematical Skills

- ▶ Numeracy is important for developing logical thinking and reasoning in daily life.
- ▶ Dealing with numbers and spatial understanding are integral part of any communication and daily life discourse.
- ▶ It is noteworthy that it is during early years that the mathematical foundations are laid .
- ▶ From a future perspective, research has also linked foundational numeracy to increased employability and higher GDP.



# Major aspects and components of Early Mathematics

During the learning of Mathematics at early stages, a child is expected to:

Count and understand the numeration system.

Learn conventions needed for mastery of Mathematical techniques such as the use of a base ten system to represent numbers.

Perform simple computations in her/his own way up to three-digit numbers and apply these to their day to life activities

Understand and use standard algorithms to perform operations of addition, subtraction, multiplication, and division on numbers up to three digits

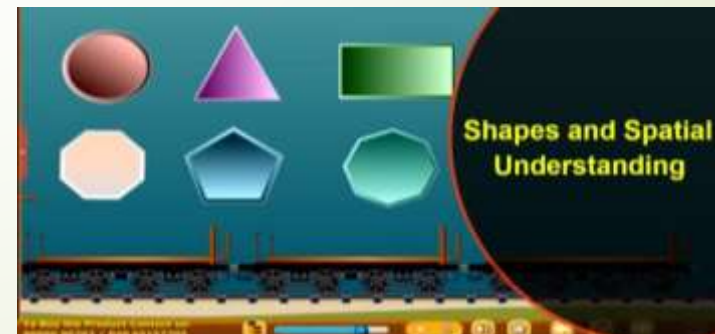
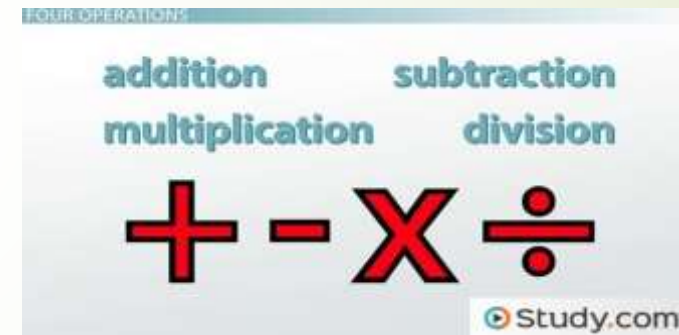
Learn vocabulary of relational words to extend his/her understanding of space and spatial objects.

Identify and extend simple patterns starting from repeating shapes to patterns in numbers.

Collect, represent, and interpret simple data/information in his/her daily life activities

# 7 MAJOR THEMES FOR THESE ASPECTS

- ➔ **i. Pre-Number concepts :** Classification , Seriation , One to one correspondence
- ➔ **ii. Numbers and operations on numbers :** Visualization , Generalization , Problem Solving, Communication
- ➔ **iii. Shapes and Spatial Understanding :** Shape, Size, Space, Position, Direction, and Movement



**iv. Measurement** : Length/distance , Weight/mass , Volume/capacity , Time , Temperature



**v. Patterns** : Decorative designs, Figures, Motifs, Shapes (arrangement, order, sequence, repetition)



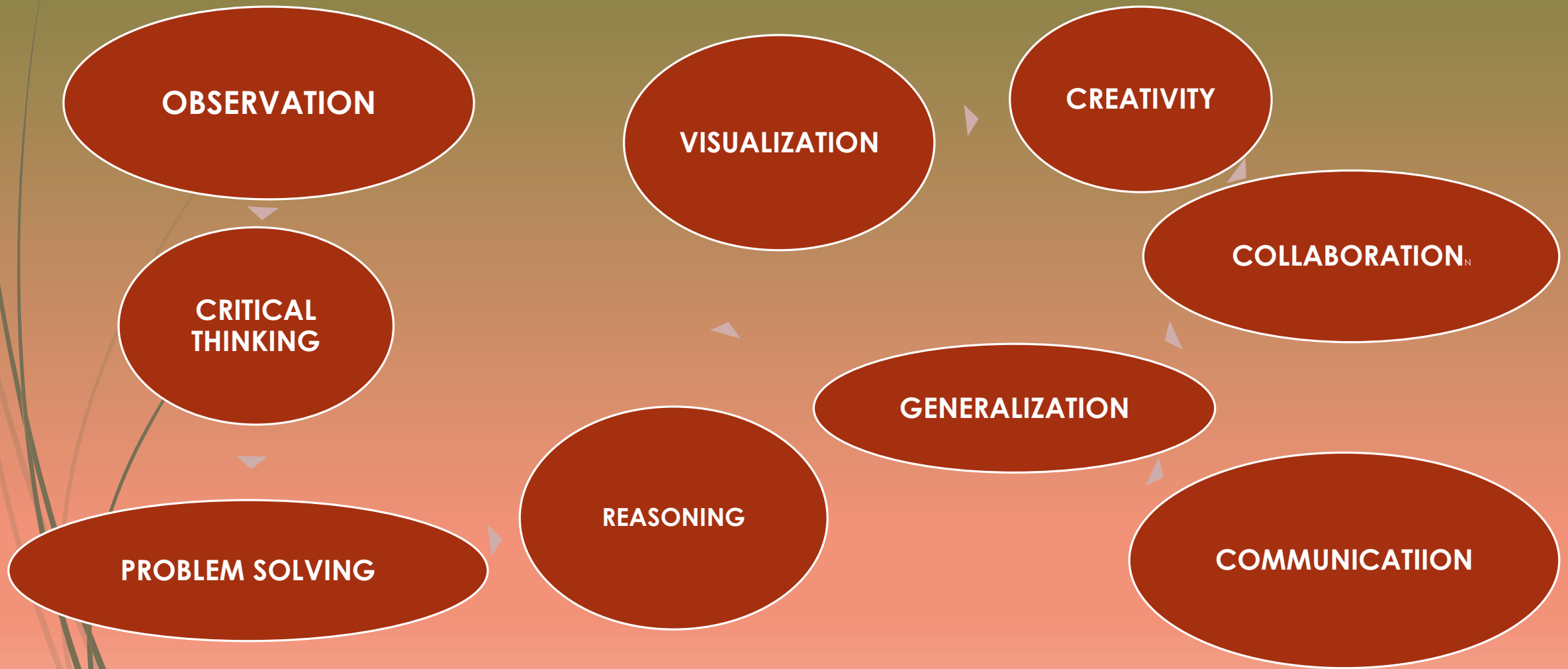
**vi. Data Handling** : Discussing , Recording , Interpreting , Representing



**vii. Mathematical Communication** : Simple, friendly, and clear language , oral and written instructions, use of mathematical language



# Pedagogical Processes to enhance Foundational mathematical (Numeracy) Skills:





# Some of the suggested processes are given as under:

All activities and interaction with children should focus on experiential learning and use of manipulative and concrete material.

Learner Centric Pedagogy

Providing scope for Exploration and Mathematical Thinking

Use of Manipulative /Toys (Toy Pedagogy)

Mathematics with daily life

Medium of instruction

Integrating mathematics with other subjects

Communicating Mathematically

Giving space to alternate strategies supporting Problem Solving

Joy in Mathematics (Recreation with Mathematics)

Space for errors in child's room


Collaborative learning



**Competency based learning is focused on student learning outcomes, and is characterized by:**

- **Children advance to the next level only upon mastering the current level.**
- **Explicit and measurable learning outcomes are defined which are the pathways for competency acquisition.**

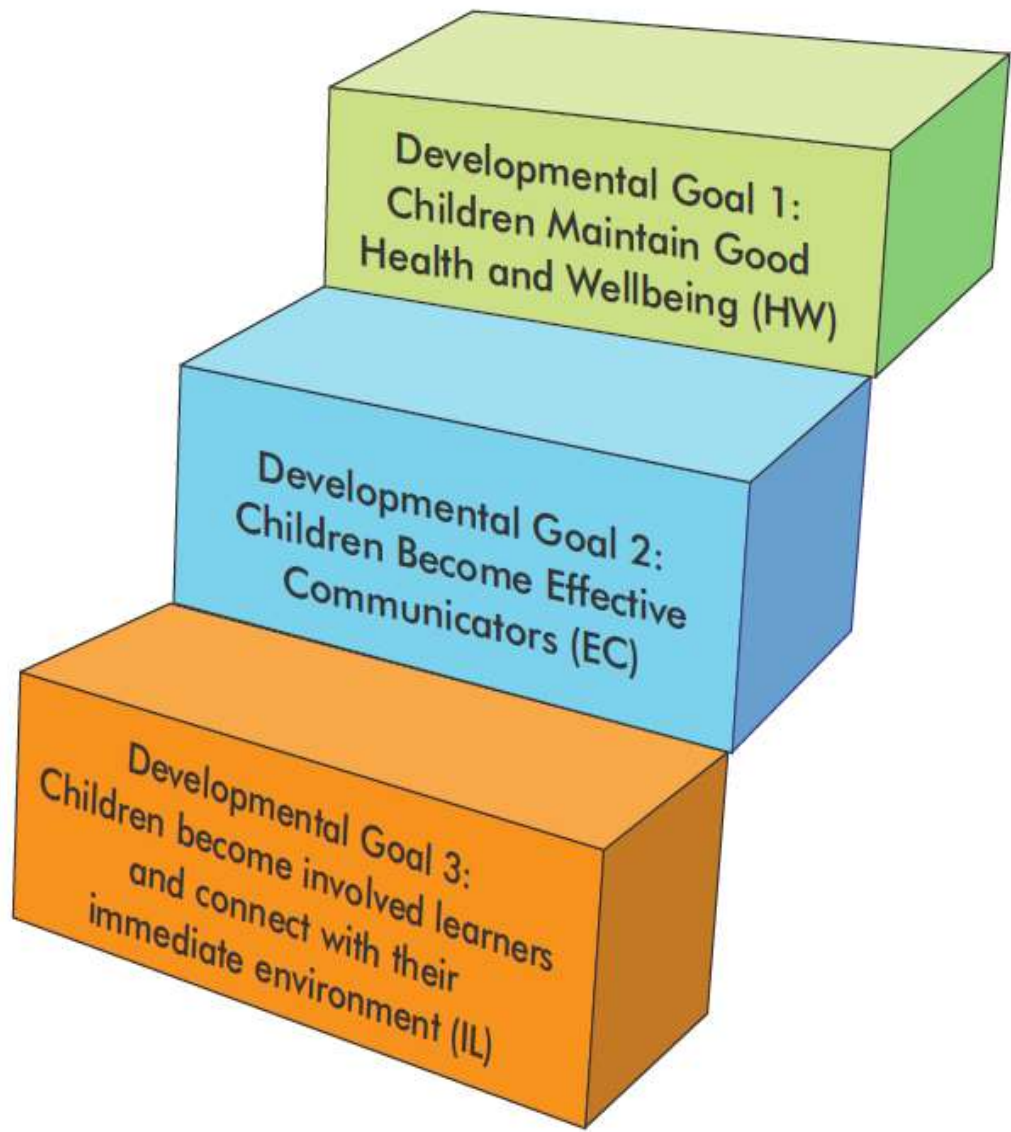
**Primarily formative assessment is used, and skills or concepts are assessed in multiple contexts to ensure that both deep understanding and applications are acquired by children.**



**The NEP 2020 has focused on the holistic development of the child. There are different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, spiritual and moral development, art and aesthetic development which are interrelated and interdependent.**

**All these domains have been subsumed into three major goals:**

- Developmental Goal 1: Children Maintain Good Health and Wellbeing**
- Developmental Goal 2: Children Become Effective Communicators**
- Developmental Goal 3: Children become involved learners and connect with their immediate environment.**



## Developmental Goal 1: Children Maintain Good Health and Wellbeing (HW)

- a. The foundational years are of critical importance for laying the foundation for optimal physical, socio-emotional, and psychological health and well-being of children for life. These are the years when children, given the right opportunities and encouragement, are developing the five senses, strengthening their larger and finer bones and muscles, and refining their eye hand coordination, which is also one of the prerequisites for being able to write in later years.
- b. Alongside, their sense of identity and social skills are developing, as they initiate and engage in more and more play activities with other children, initially in pairs and then gradually in smaller and then larger groups. Thus, they learn to play, work, and live with others in harmonious ways.
- c. They also begin to appreciate how each one of them is different and how these differences need to be not only accepted but respected.

d. Most important of all, children need to experience a sense of autonomy and confidence in their own growing abilities and achievements and develop healthy habits leading to a good physical health and development of self-esteem and a positive self-concept, which if appropriately nurtured, will stay with them for life.

e. This goal continues to provide experience for health and well-being, socio-emotional development, health, nutrition, hygienic practices, and safety from FY1-FY6 which covers age group 3 to 9 (Pre School to Class III - consisting of 2 years of Anganwadi/pre-school, one year of Balvatika and 3 years in primary school)



## Developmental Goal 2: Children Become Effective Communicators (EC)

- a. By the time three-years old come into a preschool in monolingual cultures, they have typically already begun to communicate their needs, likes and dislikes orally in their home language, which is also the school language.
- b. The experiences provided during the foundational years are required to build on all these early experiences and exposure and further enhance their communication skills so that they can orally share their thoughts and feelings or describe their experiences more effectively.
- c. It also ensures that children can receive and share information and develop higher order skills such as critical and creative thinking. They gradually learn to read and write with comprehension in that language.

### Developmental Goal 3: Children become involved learners and connect with their immediate environment (IL)

- a. Children are born curious and enchanted about the world – its colours, its shapes, its sounds, its sizes, and its forms. This ability to connect with others and to share feelings with them lays a special basis for learning- the cultural social basis of human learning. Children notice and explore patterns, shapes, and other mathematical dimensions in their immediate world. Children begin to understand the world around them by making sense of it as they 'see' it. Children's learning in the cognitive domain needs to be facilitated through development of their five senses and encouragement of the 3E's, i.e., Exploration, Experimentation and Enquiry, based on children's prior knowledge and immediate context.
- b. A major goal of foundational years education is, therefore, to help children move towards more logical thinking by helping them graduate from their perception-bound to more concept-based understanding. This gets addressed by helping children form concepts related to the world around them through direct experience and interactions with the physical, social, and natural environment.

- c. A sound framework for planning their learning experiences could help them develop understanding or knowledge for the environment, through the environment and of the environment.
- d. Mathematical thinking and reasoning is an important domain of cognitive development. The foundation for this abstract rule-based thinking gets laid through activities that are meaningful for the child. Mathematical thinking involves thinking about objects and their quantitative and spatial relationships. To begin with, a sense about these relationships emerges and based on these, the patterns and the more abstract concepts develop. During early childhood, we can see a path of development for the foundational ideas of mathematics—from what are known as pre-number concepts related to a sense of quantity, size, distance, length, width, weight, and height to sense of numbers and algebraic ideas and from sense of shape and space to geometrical ideas

# Life Skills in Early Grades





# Integrated and Holistic Development through 3 Goals



# Teaching-Learning process: Role of a Teacher



- Every Teacher who deals with Foundational Learners must understand that Children learn in variety of ways and have different learning levels in each class
- Encourage children to talk
- Creating an engaging learning environment
- Teaching through experiential and real-world based pedagogy
- Support struggling learners
- Continuous assessment and identifying learning gaps frequently
- Creating a print-rich environment in classrooms

# Learning Assessment

- A holistic and purposive assessment is vital to track children's progress by using different techniques to help the stakeholders to:
  - identify the child's strengths, needs, interests and preferences.
  - potentiate child's performance and scaffold it through interventions.
  - collaborate to solve issues and areas of concerns.
  - contribute to early identification of learning gaps and learning difficulties.
- Assessment during the foundational learning can be broadly categorized into two major areas.

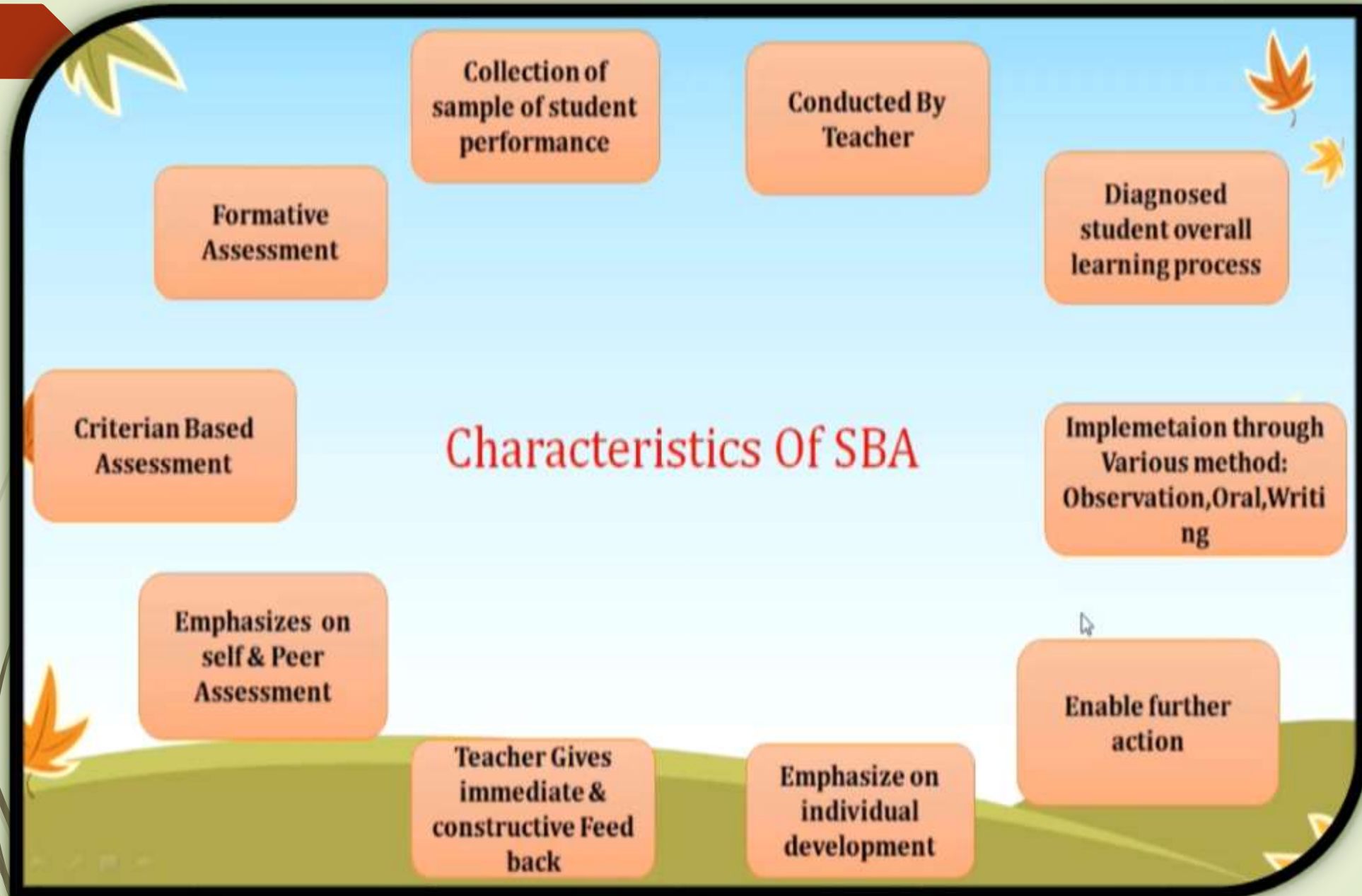
## School Based Assessment (SBA)



The term school based assessment may be defined as:

- Assessment that facilitates attainment of competencies specified in terms of learning outcomes in a holistic manner during teaching learning process.
- Assessment embedded in the teaching and learning process within the broader educational philosophy of 'assessment for learning'.
- Assessment of school students by school teachers in the schools.

**Various tools and techniques** like anecdotal records, checklist, portfolio, and interactions (through a holistic 360-degree assessment with teacher, peers, family, and friends) can be used for assessment.





## **Large-scale standardised assessment:**

The assessment tools commonly used in conducting large scale assessment studies are multiple choice questions (MCQ) and constructed responses are usually avoided to bring in objectivity in the process.

Thus, the teachers at the foundational stage need to observe children as they play, work on their task, perform or interact among themselves, it provides them a wealth of information about the children's interests and learning.



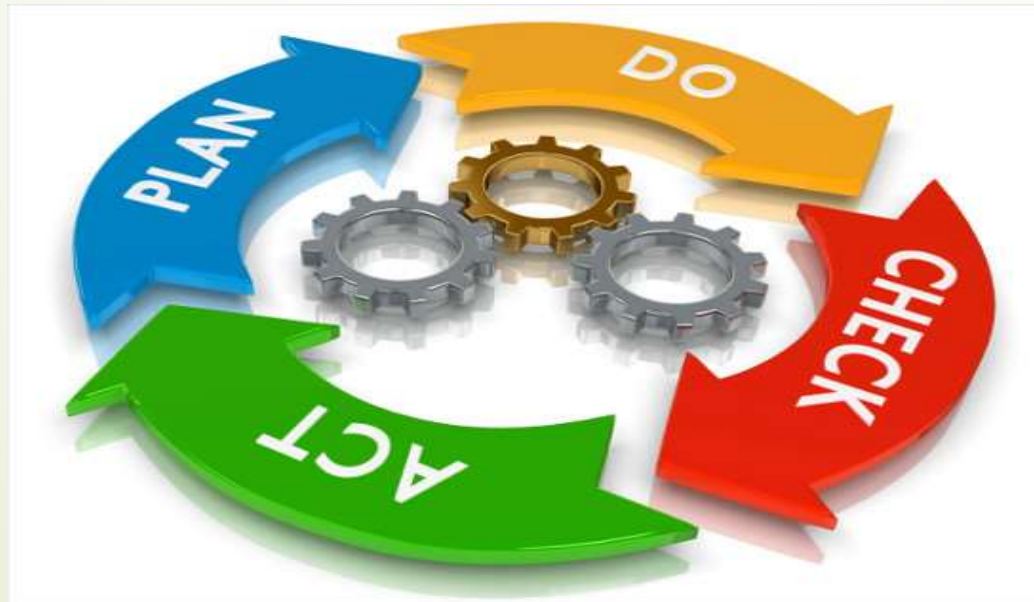
**Large-scale  
Assessments  
in Education**



## Conclusion

To conclude, the teachers at the foundational stage need to observe children as they play, work on their task, perform or interact among themselves, it provides them a wealth of information about the children's interests and learning.

This treasure of information collected under School based Assessment is used to plan the teaching learning strategies and help to modify the ongoing planning to ensure that it meets the needs of ALL children.



Thank You

