

NATIONAL INITIATIVE FOR PROFICIENCY IN  
READING WITH UNDERSTANDING AND NUMERACY  
(NIPUN BHARAT MISSION)

# HANDBOOK FOR FLN TEACHERS



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STATE COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

SCERT-KD



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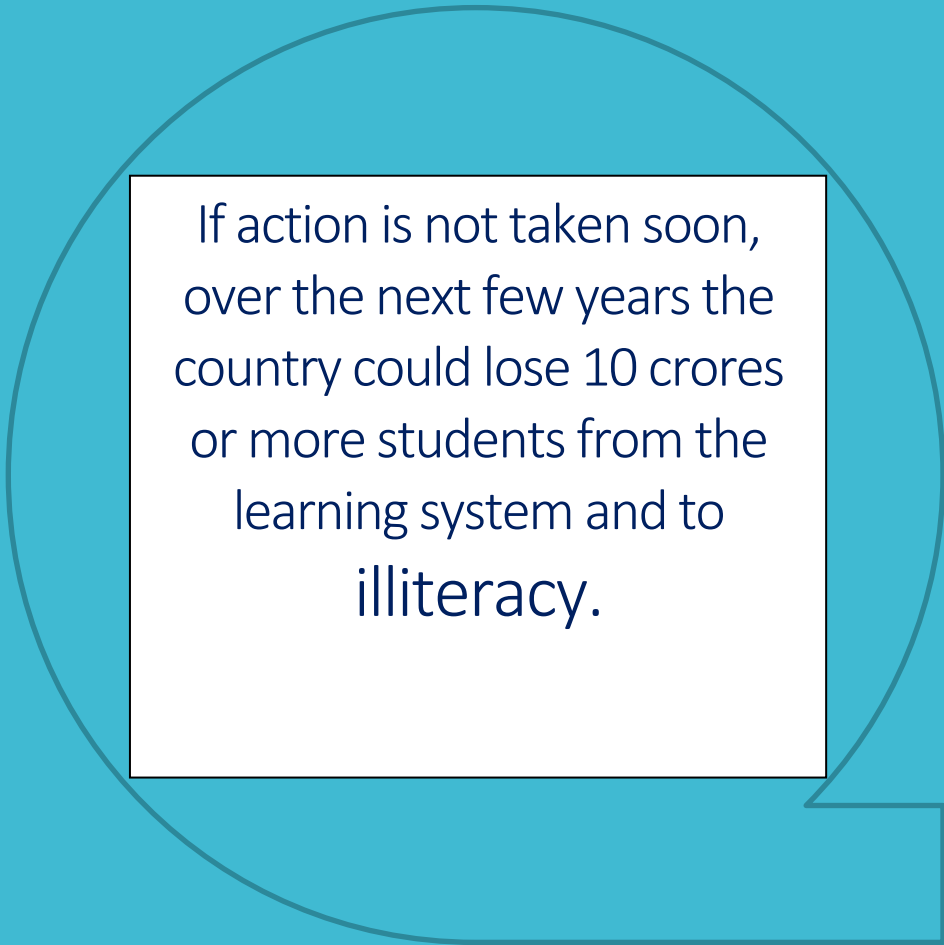
State Council of Educational Research & Training, Kashmir.

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If action is not taken soon, over the next few years the country could lose 10 crores or more students from the learning system and to illiteracy.

## Foreword

The State Council of Educational Research & Training, J & K initiated the process of teacher training material as per the recommendations of National Education Policy – 2020. The purpose of developing teacher training material is to build the capacities of our teachers to deal with modern-day classroom challenges. Any teacher handbook should address the needs of teachers and accordingly contain a variety of themes to make it interesting and joyful. Since training like pedagogy & curriculum is a dynamic concept, it becomes imperative to assimilate and adopt changing trends in it too. It is a moment of pleasure to say that teacher training has been revised and reviewed by the SCERT in tune with the recommendations of NCERT and NEP-2020. Embarking on this demanding journey of material development for the training of FLN teachers, it is encouraging that SCERT, J&K has come up with an FLN Teacher Handbook of its own in consonance with NCERT training packages, and NIPUN Bharat Guidelines issued by MoE Govt of India.

There is a complete shift from the lecture method that has made our classroom transactions redundant and boring. Keeping in view the spirit of National Education Policy-2020 which aims to make the teacher a facilitator in the teaching-learning process instead of filling pails. The teacher facilitates the construction of knowledge in the learners rather than being a source of the transfer of information.

We are in the infancy stage of implementation of NEP-2020 and have to clear many impediments. The SCERT looks forward to the stakeholders and grassroots teachers sharing their rich experiences with us to make this handbook more fruitful in times to come. Any suggestions from the stakeholders are always welcome to improve this handbook. It is expected that this Handbook helps the teachers understand the concept of NIPUN Bharat Mission fully and there will be no hiccups in adopting and implementing it.

The JKSCERT as an organization is committed to the holistic professional development of the teachers as envisaged in NEP-2020. Let's all join hands to make our schools as the centers of academic excellence. Let's put our heads together with a shared vision and systematic thinking to convert the schools to the highest benchmarks of knowledge, skills, and attitudes. We welcome any constructive feedback in this regard.

Mohammad Sharief Deedhar  
Joint Director, JK SCERT-KD

## **ACKNOWLEDGEMENTS**

We are glad to place this teacher handbook in the hands of our dear teachers, who we think will enjoy using it. This handbook offers variety and flexibility while presenting different materials. Change is certainly difficult to be accepted and then adopted; nevertheless, change is the law of nature. Our motto is to ensure stress-free, toy-based, play-way, joyful, and quality education. It is the stakeholders in the education system, i.e., teachers, students, parents, school heads, and administrators at zonal, district, and UT levels who will have to equally and enthusiastically participate in contributing towards change at the FLN stage to make schools the centres of excellence.

This handbook takes a marked shift to ‘flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning’ pedagogies to engage the learners in the process of teaching-learning in an innovative, creative, and play-way manner.

The workshop for the development of this teacher handbook was conducted w.e.f 22-26 March 2022, followed by a series of review workshops at the SCERT Level. The following experts participated in the said workshops:

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We extend our gratitude to the following key resource persons of SCERT and the field who delivered sessions during the five-day workshop for the preparation of this handbook.

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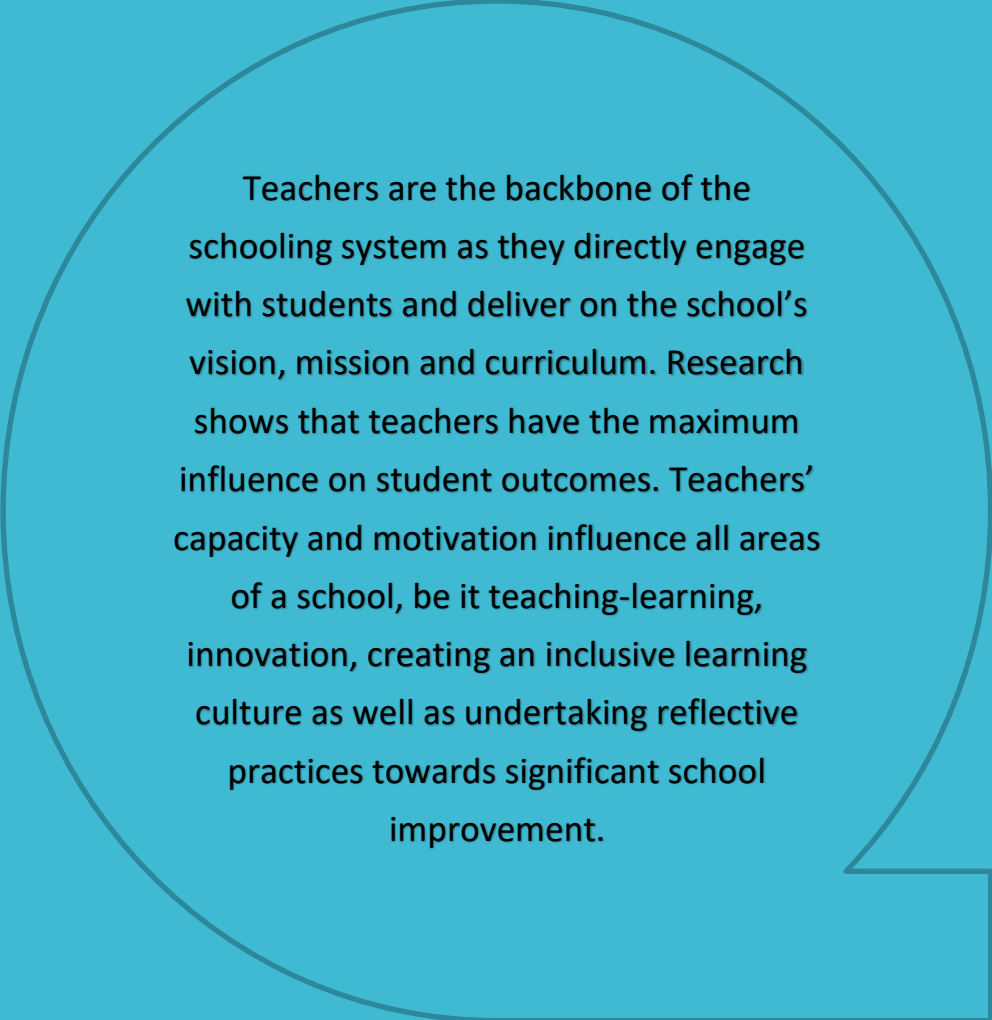
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This organization is in its transitional phase and things are changing gradually for a better tomorrow. We are grateful to Dr.Zahoor Ahmad Bhat, HoD Academic Unit One for creating the appropriate environment for the accomplishment of the task. Our thanks to Mr Sultan Khan for his efforts in bringing out the handbook.

The SCERT as the academic leader in Jammu Kashmir plans and executes the layers, descriptors, and actionables in NEP-2020, SARTHAQ Documents, NIPUN Bharat Mission, and other allied guidelines and instruction with regard to holistic education and development of teachers. We understand the opportunities and challenges in the current scheme of things and leave no stone unturned to stand to the expectations of the different stakeholders.

We wish our teachers to use this handbook to the best of their needs and send us feedback for improvements in the future.

Sheikh Gulzar Ahmad  
Dr. Jan Mudasir Gul  
(NIPUN/FLN Coordinators)



Teachers are the backbone of the schooling system as they directly engage with students and deliver on the school's vision, mission and curriculum. Research shows that teachers have the maximum influence on student outcomes. Teachers' capacity and motivation influence all areas of a school, be it teaching-learning, innovation, creating an inclusive learning culture as well as undertaking reflective practices towards significant school improvement.



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## **A Note to the Teacher**

In the major shift of academic structure in the new education policy, the focus is laid on preschool to FLN grade 3 from the age 3 to 9. The early years are the most significant period of growth and development in a child's life.

A building can only be as tall as the foundation is strong enough. The evidence says that up to age 07 the rate of brain development is very high. This is the period of critical growth, the number of connections(synapses) between cells(neurons) doubles. Synapses are places where all brain activity occurs at age seven. This fast, furious and deep phase is what is intended to be tapped through NIPUN BHARAT MISSION. Every cognitive input at the foundational years-age 8 paves the way for lifelong and effective learning

Children who participate in FLN demonstrate considerable gains in social, educational, and intellectual spheres, distinctively different from those who do not participate in such programmes. Strong foundations in the early years have a lasting impact on children's development and are considered to be critical inputs in improving the enrolment and participation of children in formal schooling. Research shows that good quality early learning programs help to reduce the chances of dropout and repetition and improves outcomes at all levels of education.

As a part of the implementation of NEP -2020 Ministry of Education, Govt. of India has launched NIPUN Bharat Mission for FLN. The aim of FLN is to ensure that children learn in a joyful manner through play, stories, rhymes, activities, local art, craft, and music and develop strong foundations for lifelong learning. The mission outlines learning outcomes that have been designed in a spiral and progressive manner from Preschool to grade three aiming at holistic development and learning. This handbook is a suggestive tool for resource persons and teacher educators and the activities, ideas, and, concepts shared in this book are aimed at the holistic development of classroom teachers and teacher educators.

The teachers of FLN grades are expected to frame their daily, weekly, and yearly plans in conformity with the developmental goals, competencies, and learning outcomes, as per the NIPUN guidelines.



# WALK TIME MS BEMIDORA (FLN)



## 1. NIPUN Pledge



### *NIPUN Bharat Mission Pledge*

*Let us join hands to ensure a conducive learning environment  
.enabling all children to achieve foundational skills*

*We pledge to make the school a place of joyful and  
experiential learning where children can use their language  
freely, ask questions freely, play freely, and where every child  
.is respected*

*Let us make the school as well as the home, a place for  
developing lifelong skills for reading with comprehension,  
writing with a purpose, and understanding numeracy, in every  
.child that they can apply in their everyday life situations*

*Let us strive to make education meaningful and joyful for each  
.child of our country and make every child NIPUN  
Jai Hind!*



## NIPUN BHARAT مشن کا عہد

آئیے ہم ایک سازگار تعلیمی ماحول کو یقینی بنانے کے لیے ایک ساتھ جڑیں اور تمام بچوں کو بنیادی مہارتیں حاصل کرنے کے قابل بنائے۔

ہم اسکول کو ایک خوشگوار اور تجرباتی دانشگاہ بنانے کا عہد کرتے ہیں جہاں بچے اپنی زبان آزادانہ طور پر استعمال کر سکیں، آزادانہ طور پر سوالات پوچھ سکیں، آزادانہ طور پر کھیل سکیں اور جہاں ہر بچے کا احترام کیا جائے۔

آئیے ہم اسکول کے ساتھ ساتھ گھر کو، ہر بچے میں فہم کے ساتھ پڑھنے، ایک مقصد کے ساتھ لکھنے، اور شماریات کو سمجھنے کے لیے زندگی بھر کی مہارتیں پیدا کرنے کی جگہ بنائیں، جسے وہ اپنی روزمرہ کی زندگی کے حالات میں استعمال کر سکتے ہیں۔

آئیے ہم اپنے ملک کے ہر بچے کے لیے تعلیم کو بامقصد اور خوشگوار بنانے کی کوشش کریں اور ہر بچے کو NIPUN BHARAT بنائیں۔

!جئے ہند

Courtesy: Divisional Nodal Officer, NIPUN Bharat Mission, SCERT-KD



## نیپن عہد (NIPUN PLEDGE)

وَلُو تہ اکھ سازگار تعلیمی ماحول یقینی بناونہ باپت  
رَلو یکہ ووٹہ تہ بناووکھ تمام بچہ بنیادی مہارتہ  
حاصل کرنس قابل۔

اسی چہ سکولس اکھ خوشگوار تہ تجرباتی دانشگاہ  
بناونک وعدہ کران ییتہ بچہ پننی ماجہ زبو آزادانہ طور  
استعمال ہیکن کرتہ، آزادانہ طور سوال ہیکن  
پررتہ، آزادانہ طور ہیکن گندتہ تہ ییتہ پرتہ بچس ییہ  
احترام کرنہ۔

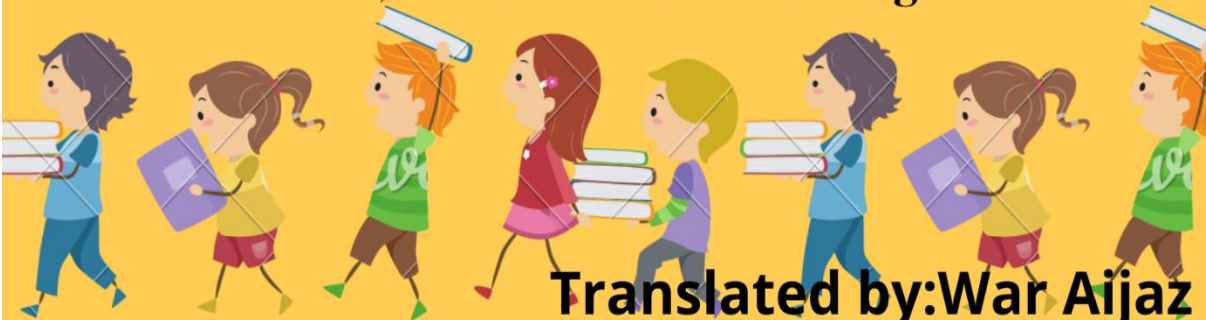
وَلُو اسی کرو سکولس سستی سستی گرس اندر تہ پرتہ  
بچس مئز سمجتہ پرنک، اکیس مقصدس سستی لیکھنک،  
تہ گرنڈ سمجنہ خاطر پور زندگی ہنڈ مہارتہ پاد کرنچ  
جائے بناونچ کوشش، ییتہ سہ پننہ دوہ دشچہ زندگی  
ہنڈن حالتن مئز استعمال کرتہ ہیکہ۔

وَلُو اسی کرو پننہ ملکہ کس پرتہ بچس باپتہ تعلیم  
با مقصد تہ خوشگوار بناونچ کوشش تہ بناوون پرتہ  
(NIPUN) بچہ نیپن

جے ہنڈ

Courtesy: Divisional Nodal Officer NIPUN BHARAT

MISSION, SCERT-KD Bemina Srinagar



Translated by: War Aijaz

## 2. Introduction to Foundational Literacy and Numeracy

### Why FLN?

Read the following case study:

Reshma and Rashid were incredibly happy with their son, Umar's school. Umar was 6+ years old and studying in 1st standard in a posh and well-known public school in a large city. Reshma and Rashid used to meet the stern class-teacher once every two months during PTM and were given a five-minute briefing on Umar's progress. By all standards he was doing very well. The school had made Umar such a disciplined, quiet child, who spoke only when spoken to, and considered studies more important than playing with his noisy friends in the neighbourhood. Reshma and Rashid took pride in the fact that the school gave him loads of homework everyday of repeatedly practising writing letters of the alphabet. They were convinced that he would grow up to have the best handwriting in their family.

One fine day, when Umar was in 2nd standard, Reshma and Rashid had to relocate to a smaller town on transfer. In the new town, Umar was admitted to a new school, close to their house, that had very basic facilities, but the teachers appeared very warm and friendly. On the third day in school, the class teacher requested an audience with the parents. She conversed with them for almost an hour and informed them that Umar is not able to keep pace with the class, because he is not able to read. "But he can read and write all letters of the alphabet", said Rashid. The teacher informed him that at the end of class 1, Umar should have been able to "Read small sentences consisting of at least 4-5 simple words in unknown text, so that in class 2, he is able to read unknown text of 8-10 sentences with simple words with appropriate speed (approximately 30-35 words per minute correctly) and clarity."

The parents were shocked and did not know what to do next. The teacher told them not to worry and informed that she would work separately on Umar to make him catch up with the rest of the class. At the end of three months, Umar managed to catch up, and what surprised the parents much more was that Umar had transformed into a happy, playful kid who loved playing with his friends every day and reading a new story book on his own every week.

Reshma and Rashid have decided to continue to stay in the small town until Umar completes his school education in this wonderful, joyful school!

## **Reflective questions:**

(Think for a while and respond to these questions.)

1. The family was convinced that their child was developing holistically in the school where he was admitted. The school had some special instructions and pedagogy for the children. Do you agree with the mechanism in place in the school? Why/or Why not?
2. In the second part of the case study, we witness a different school with novel ways of teaching. The parents are surprised to witness the change in their child. What has transformed the child in the new school?

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. Attaining foundational literacy and numeracy for all children must become an immediate national mission. Students, along with their schools, teachers, parents, and communities, must be urgently supported and encouraged in every way possible to help carry out this all-important target and mission, which indeed forms the basis of all future learning.

### **How to achieve FLN?**

Recognizing the crucial role of Foundational skills in national development, it was announced under the 'Atma Nirbhar Bharat' campaign that a National Foundational Literacy and Numeracy Mission has been launched, for ensuring that every child in the country necessarily attains foundational literacy and numeracy by the end of Grade 3, by 2026-27. For this purpose, a vibrant curricular framework, engaging learning material (both online and offline), defined and measurable learning outcomes, teacher capacity building, assessment techniques, etc. has been/ are being developed to take it forward in a systematic fashion.



In this context, a National Mission on Foundational Literacy and Numeracy called “National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat)” has been rolled out by the Ministry of Education (MoE) on priority. 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. The Mission has been set up under the aegis of the centrally sponsored scheme of Samagra Shiksha which is an integrated scheme of school education covering from Pre-School to Senior Secondary level. It focuses on children of the age group of 3 to 9 years including pre-school to Grade 3. The children who are in Classes 4 and 5 and have not attained the foundational skills will be provided individual teacher guidance and support, peer support, and age-appropriate and supplementary graded learning materials to acquire the necessary competencies. The goals and objectives of the mission are required to be achieved by all Govt., Govt. aided, and Private Schools so that universal acquisition of FLN skills can be achieved by 2026-27.

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. Recognizing the importance of early learning, the National Education Policy 2020 states that “Our highest priority must be to achieve universal foundational literacy and numeracy in primary school and beyond by 2025. The rest of this Policy will be largely irrelevant for such a large portion of our students if this most basic learning (i.e., reading, writing, and arithmetic at the foundational level) is not first achieved.” To this end, a National Mission on Foundational Literacy and Numeracy is being set up by the Ministry of Education (MoE) on priority. The Mission will focus on five 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, tracking the progress of each child in achieving learning outcomes, and addressing the nutrition and health (including mental health) aspects of children.

The vision of the Mission is to create an enabling environment to ensure universal acquisition of foundational literacy and numeracy so that by 2026-27 every child achieves the desired learning competencies in reading, writing and numeracy at the end of Grade III. The mission will cover the learning needs of children in the age group of 3 to 9 years. Accordingly, a nationwide exercise to identify learning gap, its probable reasons and various strategies keeping in view local circumstance and diversity of country has been initiated. Moreover, with the aim to establish strong linkage and smooth transition between pre-school stage and Grade I, ECCE Curricular framework developed by NCERT will be followed by both Anganwadis and Pre-primary schools to ensure smooth transition to grade I. Hence, learning will be Holistic, Integrated, Inclusive,

Enjoyable, and Engaging. Thus, the National Mission on FLN will be implemented with the use and strengthening of the existing mainstream structures and will take a holistic approach through the active involvement of all stakeholders.

## 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 pre-school 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.

The key components in Foundational Language and Literacy are:

- Oral Language Development: The experiences in oral language are important for developing skills of reading and writing.
- 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: This domain includes competencies of print awareness, Aksharas/ Haroof (letters) knowledge and decoding, and word recognition.
  - Vocabulary: This domain includes the competencies of oral vocabulary, reading/writing vocabulary, and morphological analysis of words.
- Reading Comprehension: This domain covers the competencies of understanding texts and retrieving information from them, as well as interpreting texts.
- Reading Fluency: Refers to the ability to read a text with accuracy, speed (automaticity), expression (prosody), and comprehension that allows children to make meaning from the text.
- Concept about Print: Children need exposure to different types of print rich environment to develop the skill of comprehension.
  - Writing: This domain includes the competencies of writing aksharas/ Haroof (letters) and words as well as writing for expression.
- Culture of Reading/Inclination towards Reading: Involves the motivation to engage with a wide variety of books and other reading 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. The major aspects and components of early mathematics are:

- Pre-Number Concepts: Count and understand the numeration system.
- Numbers and operations on numbers: Learn conventions needed for mastery of Mathematical techniques such as the use of a base ten system to represent numbers.
- Measurement: Understand and use standard algorithms to perform operations of addition, subtraction, multiplication, and division on numbers up to three digits.
- Shapes and Spatial Understanding: Perform simple computations in her/his own way up to three-digit numbers and apply these to their day-to-day life activities in different contexts.
- Patterns: Learn vocabulary of relational words (e.g., across, above, behind, inside, far, near, next to, in front of, to the right, etc.) to extend his/her understanding of space and spatial objects.

## **Academic approaches to improving FLN Teaching Learning:**

Focus on Learning of the Child in India, we have many children who are first-generation learners and do not have an environment of literacy and numeracy at home. Teachers, therefore, need to focus on developing phonological awareness and sound discrimination, and visual perception and visual association that helps children to develop into better readers and writers. Further, the foundation for mathematical learning or abstract thinking gets laid through play and activity-based approaches (including toy-making, art integration, sports integration, storytelling-based learning, ICT integration, group work, role plays, project work in groups, etc.) that are meaningful for every learner. Hence, teachers would need to focus on the following:

- Demonstrate equal and appropriate expectations from boys and girls by providing equal attention, respect, and equal learning opportunities.
- Select books, pictures, posters, toys/materials and other activities free of gender bias.

- Not use gender biased statements while talking to the learners or giving instructions in the classrooms.
- 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.
- Encourage learners to follow their interest that enables them to develop skills of self- regulation, perseverance on task and good work habits. Use toy-based pedagogy and experiential learning. Emphasis to be given on self-making of toys with no/low cost material by children easily available in the surrounding. Toys owned by children can be pooled for communication skills, where each child brings a toy to school and then talks about it or writes about it, etc.

### **Do you know?**

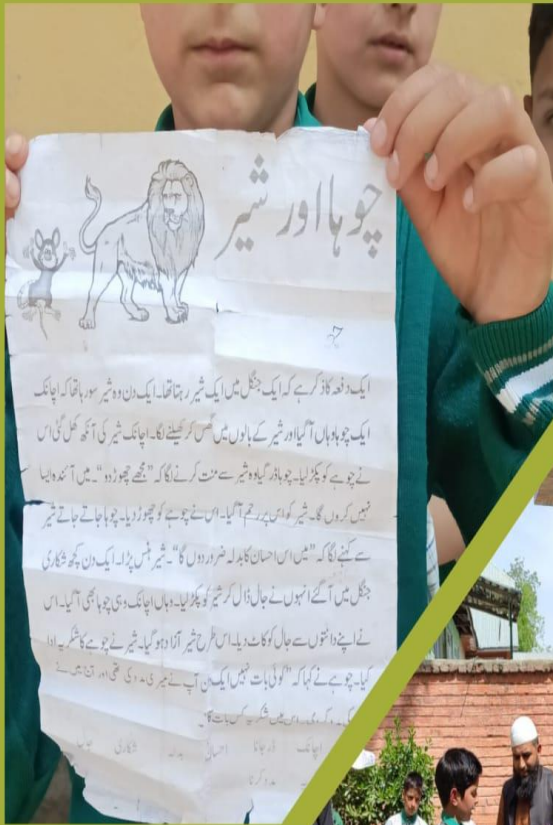
*Children possess a small number of cognitive and brain systems that help them identify and think about specific aspects of the world, such as places, things, and people. These core knowledge areas (also known as core knowledge systems) are evident in human infants, are shared by other animals, function throughout life, and are common to people living in diverse cultures. Each core knowledge area also has been tracked in the brains of animals and human adults, children, and infants, where it activates specific regions of the cerebral cortex. Thus, developmental scientists can identify common core areas across different individuals, at different ages, and living in different cultures. As scientists from diverse disciplines have studied the properties of these areas, their studies have revealed at least five distinct core knowledge areas that are central to all children’s learning:*

1. *Learning about Places*
2. *Learning about Numbers*
3. *Learning about Objects*
4. *Learning about Peoples’ Actions and Goals*
5. *Learning about Social Interactions, Communication, and Language*

*We expect that you will explore more on the internet about these core essentials of the holistic development of the child.*

### **Key Takeaways:**

- Learning a playful and joyful process.
- FLN, the basis of all future learning.
- Collaborating with students along with their schools, teachers, parents, and communities for the holistic development of future generations.



**Story telling 11/04/22**  
**MS Ponipora zone kulgam**





### **3. Addressing Teachers' Beliefs and Attitudes towards Learners**

Talking to teachers on various occasions, one can find that they often express their own beliefs and assumptions about the abilities, languages, and cultures of their children. These inform their practice in class. Often these beliefs and attitudes do not get addressed during pre-service teacher education and get reinforced in the system further. As per many research studies, teachers often expressed that children from deprived social and economic backgrounds with illiterate parents will not be able to learn everything taught in class and therefore, have low expectations from these children.

Further, they also believe that teaching-learning of language literacy must start with the alphabet. Children's home languages are a problem. Many home languages are considered inferior to the standard language.

In the case of mathematics learning, most teachers believe that once they have demonstrated a procedure followed by repeated practice by children, it will result in mastery of the concept.

Hence, it is necessary to address these misconceptions in the in-service training programs to make for effective implementation of foundational learning in the classroom.

**Every teacher who deals with foundational learners must understand:**

- Children learn in a variety of ways and have different learning levels in each class.
- Children learn more when they are encouraged to talk and discuss in the classroom. In the majority of classrooms, teachers talk most of the time while children either give choral responses or are passive spectators.
- Activities, like choral repetition, and copying from the blackboard, are repeatedly done mechanically and do not result in learning. Children soon get disinterested or distracted and their 'time-on-task' is low. Most children are not actively engaged for most of the teaching time.
- Children get distracted if there is no sense of enjoyment or fun in the learning process.
- Children do not take interest in learning if teaching in the classroom is textbook centered and the emphasis is on completing the curriculum and if the teaching-learning is disconnected from the children's context and real-world experiences.



- Teachers must be able to provide additional support to children who are lagging.
- Learning assessment, including examinations, to be largely focused on testing for skills or concept development rather than content. Teaching must integrate continuous assessment.
- Children join the school with informal mathematical thinking as they solve simple problems in real life. Therefore, mathematics learning in the classroom must relate to the children's outside school experiences.
- There are very few children's reading materials or TLM in most classrooms. Often, there are alphabet and number charts displayed in the classroom or painted on the classroom walls. Thus, children do not get any chance to engage with books or other learning materials. Teachers need to provide a print-rich and toy-rich environment in the classroom.

### **Reflections of NEP-2020 and recent Research across the globe about the role of Teachers:**

Development of early language and literacy, and mathematics skills is crucial for building the foundation for future learning. As per the National Education Policy, 2020, schooling in the early years lays too little curricular emphasis on foundational literacy and numeracy and, in general, on the reading, writing, and speaking of languages and on mathematical ideas and thinking. Indeed, the curriculum in early grades moves very quickly towards rote learning and more mechanical academic skills, while not giving foundational material its proper due. The principle must be that: if students are given a solid foundation in reading, writing, speaking, counting, arithmetic, mathematical and logical thinking, problem-solving, and being creative, then all other future lifelong learning will become that much easier, faster, more enjoyable, and more individualized; all curriculum and pedagogy in early grade school must be designed with this principle in mind.

Therefore, strengthening teaching-learning of early literacy and mathematics is very much essential. Language is intricately linked with thought and understanding. For a young child, a strong foundation of oral language, reading, writing, and thinking skills is the basis for all future learning. Mathematics is one of the core components of early learning. The burden of non-comprehension in early mathematics learning can result in fear and phobia, this continues to bother children not only in later grade mathematics but also across the curriculum. Chapters on foundational literacy and numeracy in this handbook provide a detailed perspective of pedagogies of early literacy and numeracy.

Teachers play vital roles in the lives of the students in their classrooms, especially in the foundational years. Beyond that, teachers serve many other roles in the classroom and schools. Teachers are the managers of their classrooms. They build a warm, inclusive learning environment, mentor and nurture students, become counselors, and listen to and look for any symptoms or signs of stress, anxiety, or other behavioral problems in students.

### **Enabling Classroom Transactions: Sustained & Active Engagement with Every Child:**

- Teaching–learning preferably should be in the mother tongue of children. The language of school instruction should be related to daily life experience and socio-cultural context.
- Encouraging children to share their experiences in the class in their language and use their talk as a resource in building classroom discussion richer by drawing from the multilingual situation.
- Encouraging activities like morning message (AajkiBaat) that bridge home-school gaps and present reading-writing connections to young children.
- Encourage children to build connections between oral language and written language.
- Specific strategy for a smooth transition from home language to the medium of instruction, if different.
- Allow children to invent their ways of using existing vocabulary to convey mathematical ideas related to numeracy and spatial understanding.
- Provide opportunities to learn formal mathematical language viz., numerals, symbols for operation, terms, etc.
- Use simple, friendly, and clear language in the classroom avoiding commands.
- Encourage children to express their mathematical findings and later gently pointing out errors, if any.

### **Important points the teachers should keep in mind during classroom transactions:**

- A daily dedicated slot for FLN – 90 minutes for language and 60 minutes for numeracy needs to be included in the daily schedule of activities.
- Teachers are free to design their own or use the existing activities and worksheets, toys, etc. for achieving pre-determined early learning outcomes. Make activities flexible and accessible to children with special needs.
- The mother tongue is to be used as a medium of instruction and teachers should welcome as many languages in the classroom and appreciate them. Use multilingualism in the classroom as a resource.

- Print rich classroom environment should be created in the form of word walls, storybooks, and posters to assist in the development of print awareness and literacy skills.
- Good quality teaching learning material for both students and teachers should be made available.
- Use indigenous/ locally available material which is low-cost or no-cost and easily accessible. Make sure children can manipulate the material and have safe access to the material and other resources.
- Variety of activity areas like reading area, creative area, etc. need to be designed by teachers to encourage free play, social-emotional development skills, etc.
- Display of material should be at the eye level of the children.

### **Key Takeaways**

- Early spatial abilities support children's learning about their immediate environment, as well as learning about spatial symbols such as pictures, maps, scale models, the alphabet, and number lines.
- If students are given a solid foundation in reading, writing, speaking, counting, arithmetic, mathematical and logical thinking, problem-solving, and being creative, then all other future lifelong learning will become that much easier, faster, more enjoyable, and more individualized; all curriculum and pedagogy in early grade school must be designed with this principle in mind.



**Glimpses of different activities during the five-day programme**

#### 4. SHIFTING TOWARDS COMPETENCY-BASED LEARNING

**This chapter discusses the:**

- Importance of Competency-Based Learning.
- Life Skills in Early Grades: Focus on competencies arising out of a combination of abilities in the domains of knowledge, skills, attitudes, and values.
- Integrated and Holistic Development through 3 Development Goals.
- Codification of Learning Outcomes as per the 3 Development Goals.

*The teacher was waiting for them. "You all worked hard this morning," she said, "so what would you like to do this afternoon?"*

*Before Totto-chan could even begin to think about what she wanted to do, there was a unanimous shout.*

*"A walk!"*

*"All right," said the teacher, and the children all began rushing to the doors and dashing out. Totto-chan used to go for walks with Daddy and Rocky, but she had never heard of a school walk and was astounded. She loved walks, however, so she could hardly wait.*

*Out of the gate, they went--all nine first grade pupils with their teacher in their midst--and began walking along the edge of a stream. Both banks of the stream were lined with large cherry trees that had only recently been in full bloom. Fields of yellow mustard flowers stretched as far as the eye could see. The children chatted away about anything they liked as they walked along. The sky was blue and the air was filled with the fluttering of butterflies.*

*After they had walked for about ten minutes, the teacher stopped. She pointed to some yellow flowers, and said, "Look at these mustard flowers. Do you know why flowers bloom?" She explained about pistils and stamens while the children crouched by the road and examined the flowers. The teacher told them how butterflies helped flowers bloom.*

*And, indeed, the butterflies seemed very busy helping.*

*Little did the children realize then that these walks--a time of freedom and play for them--were in reality precious lessons in science, history, and biology.*

*Excerpt from TOTTO-CHAN-The Little Girl at the Window, by Tetsuko  
Kuroyanagi,*

*translated by Dorothy Britton*

## **Learning Outcomes and Competencies**

Learning outcomes are statements that describe the knowledge, skills and attitudes, students should acquire by the end of a particular assignment, class, course, or program, and help students understand why that knowledge and those skills will be useful to them. The combination of knowledge, skills, attitudes, and values form the competencies that are expected to be developed in everyone. They focus on the context and potential applications of knowledge and skills, help students connect learning in various contexts, and help guide assessment and evaluation. In competency-based education, teaching and learning focuses on acquiring these basic competencies which can be measured through learning Outcomes.

The National Council of Educational Research and Training (NCERT) developed "Learning Outcomes (LOs) at the Elementary Stage" in 2017 for each class and subject. These learning outcomes were the result of wide consultations and field trial in different types of schools located in different parts of the country. In continuation, learning outcomes for the secondary stage<sup>10</sup> have also been developed in 2019. These are expected learning achievements which are spelt class-wise. These learning outcomes are not suggested in hierarchical manner. Learners can achieve these learning outcomes at their own pace and skills. Teachers are provided with pedagogical and assessment inputs to follow process-oriented methods of achieving the stated LOs. They can design and provide a variety of learning situations/opportunities as per the needs of different learners in an inclusive classroom. These LOs have served as guiding points for the teachers and the stakeholders and are being used widely to assess the progress of learning of children in different classrooms.

### **Importance of Competency Based Learning**

#### *a. Unique Experiences of Children:*

Children come to school from different backgrounds and contexts-some children have parents and adults in the family who engage with them-play, tell stories, provide interactive language experiences, provide safety, connections, and high-quality routines, which are enriching and interesting for children. On the other hand, there are children who have experienced less engaging and enriching early childhood years, without secure attachments, safety and connection, good nutrition, and rest, and without enriched learning opportunities. As a result, children have differences in readiness for school when they begin preschool or kindergarten. Additionally, children in the same class might have a 12-month age difference. There are differences in the levels of language skills, visual-motor skills, and social readiness. Children having varied levels of oral language development, second language learners, diversity in home atmosphere may result in different types of learners having different learning needs.

b. *Competency Based Learning:*

When children from diverse backgrounds having different learning, needs enter the formal school, all of them are expected to be ready for grade-level content to be covered and tested in a time-limited learning system. In many schools in India, children are offered non-responsive instruction which does not serve their learning needs, but focus is on completing the syllabus without monitoring what children are learning. One-size-fits-all instruction and testing quickly classifies children into winners and losers. By the end of third grade, children have settled into patterns of learning that usually persist for life. An alternative to the traditional learning system is the competency-based learning. Competency based learning is focused on student learning outcomes, and is characterized by the following:

- Explicit and measurable learning outcomes are defined which are the pathways for competency acquisition.
- The pedagogy is based on activities, experiences, integration of arts/sports/ technology, etc. and connecting the learnings to real-life situations, so that child learns to apply knowledge.
- Children advance to the next level of learning outcomes only upon achieving certain level of proficiency at the current level.\*
- 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.

*\*(World Class – How to build a 21st century school system; by Andreas Schleicher, published by OECD page 67-68, “Mastery learning builds on the understanding that learning is sequential, and that mastery of earlier tasks is the foundation on which mastery of subsequent tasks is built. According to American psychologist John Carroll, student learning outcomes reflect the amount of time and instruction a student needs to learn, and whether the opportunity to learn and quality of instruction are sufficient to meet students’ needs. For teachers, that means that they do not vary the learning goals, which hold for the entire class, but that they do whatever is needed to ensure that each student has the opportunity to learn the material in ways that are appropriate to him or her. Some students will require additional instruction time, others will not; some students will require different learning environments than others. Behind this thinking is the deep belief that all students can learn and succeed, and that the task of teachers is to design the learning environments, whether inside or outside the classroom, that help students realise their potential.”)*

In the competency model, instruction is designed to match the developmental readiness of the students. Students are given instruction at their personal level of readiness for as long as necessary to achieve desired competency. **Moving to the next level is not determined by time or age but by the mastery of the competency.** This can be different for different

competencies/subject areas. With such flexibility, students fall in love with learning and become successful learners. For higher rate of success, instructions should be provided at a level that is challenging for children.

c. *Assessments in Competency Based Learning:*

Formative assessments are emphasized so that teachers get to understand where students are facing difficulties, having misconceptions so that they can be extended help and are given feedback about their performance and where they need to improve. Assessment is used as a guiding tool, which is meaningful and provide positive learning experiences for children. Students construct their own knowledge by actively participating, applying critical-thinking and problem-solving skills along with good communication skills, collaboration, and cultural responsiveness to help them work in ever-changing, diverse environments.

**Life Skills in Early Grades**

a. *Life Skills:*

Competency-based education requires focus on competencies arising out of a combination of abilities in the domains of knowledge, skills, attitudes, and values. Life skills are defined as a set of abilities, attitudes and socio-emotional competencies that enable individuals to learn, make informed decisions and exercise rights to lead a healthy and productive life and subsequently become agents of change. Life skills promote mental well-being and competence in children as they face the realities of life. These skills support the development of foundational skills such as literacy, numeracy, digital skills. In today's digital age, everything is changing at an amazingly fast pace and therefore to adapt to new situations, children need to be taught to focus and exercise self-control, think critically, work collaboratively, take on challenges, make connections and engage in self-directed learning and develop effective communication skills. The early years are a time when children begin to develop self- concept and their feelings of competence and confidence as learners. The knowledge, attitudes, and skills that children acquire during these early years serve as the foundation for future success in their school and community and prepare them to be effective global citizens.

b. *Decision Making Skill:*

Making good decisions is a life skill that every child should begin learning at a young age. Children are required to make decisions and choices. The decision-making process involves identifying the issue, gathering data, generating possible courses of action, evaluating alternatives, and making a thoughtful decision based on the information available. The curriculum should be based on making connections, constructing knowledge by building on prior knowledge and involving students in meaningful tasks that relate to real life.



By involving children in projects, they are practising their organizational, collaborative and time management skills.

c. *Organising Skills:*

Children learn through routines, schedules, and habits. Teaching children, the values of sharing, caring, working cooperatively, organizing spaces by keeping the toys back, tidying up and sharing classroom experiences with their parents is also important. Spaces at home and in school should be organised in such a way that children know where to keep their belongings like bags, shoes, clothes etc. This provides security to children and they learn to develop self-control and focus. Inform children about the expectations each day like tidying up after the activity, stacking the toys back etc. The value of routines and schedules should also be instilled in children from a young age.

d. *Communicating Skills:*

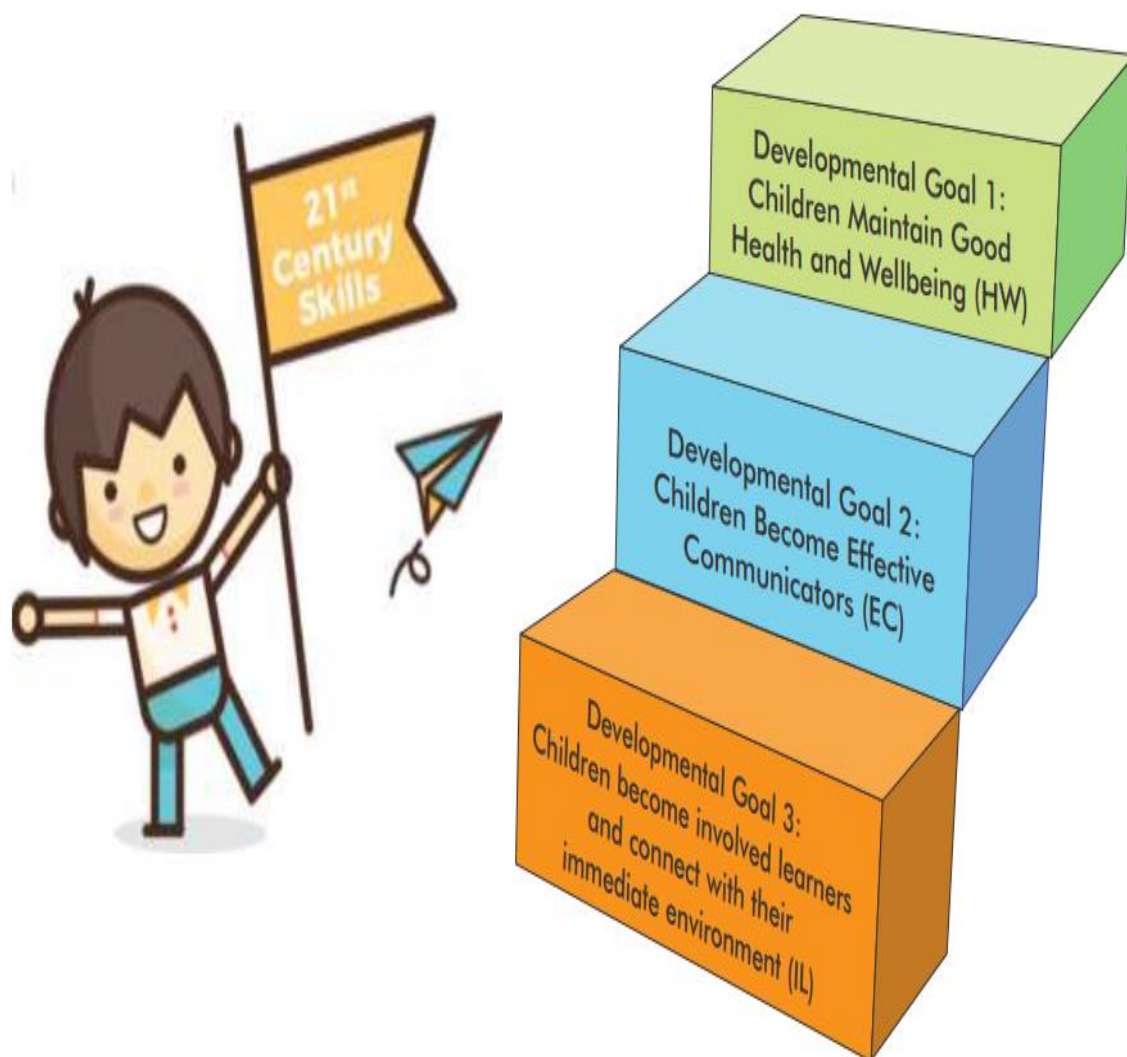
To build healthy social-emotional skills, children require communicating with others and needing high-touch personal interactions every day. When adults listen, talk, and respond to children by providing undivided attention, children also learn to listen carefully and learn to read social cues. They also learn to consider what they want to communicate and how it can be communicated in the most effective way. Confidence in speaking, discussion, debate, writing, and problem solving provides a good start for acquiring the skills. Students become independent in their own learning, where teachers assume the role of facilitators, guiding them through their learning process.

e. *Encouraging Curiosity:*

Children should be fully engaged in the learning process. They should be assisted in making personal connections and making meaning of the new material and integrating these learnings with what they already know. Facilitating the transfer of knowledge and skills to real-life situations is important. Children should be encouraged to think and ask questions when they do not understand. The primary aim of education is that the learner will acquire knowledge, understand what has been acquired and make informed decisions in the application of that knowledge to solve problems. The process necessitates thinking. Thinking is the contextual connection between the relevant pieces of knowledge; thinking connects the dots. With reading and writing, if the learner is unable to make connections between the content and their life, the content loses meaning. Schools should provide an environment where students can develop the ability to see relationships between subjects, content, and skills as well as between school and life outside of the classroom.

## Integrated and Holistic Development through 3 Goals

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. These developmental aspects make child competent to deal with complex life situations. All these domains have been subsumed into three major goals which are briefly discussed here:



## 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)

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**Developmental Goal 2:  
Children become Effective Communicators (EC)**

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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.

d. However, this scenario is possible only in contexts where the medium of instruction or interaction in schools is the same as the child's home. Given our country's multilingual context, we have many children whose home language is different from the medium of instruction in school or preschool. These include contexts such as that of tribal languages or dialects of regional languages and the contexts of English medium preschools where children come in with little or no familiarity with oral English/school language. Starting children on reading and writing without ensuring their oral language base results in children learning to read mechanically through simple decoding, but without much comprehension. Since all school subjects are language-mediated, this early learning gap inevitably has an adverse impact on children's later performance in school. In addition to this challenge, we have many children who are first generation learners and do not have an environment of literacy at home. They may not have seen books or had anyone reading to them or have a vague concept of print, text or meaning and value of reading and writing activity.

Therefore, it is imperative that teacher communicate with the child in his language in pre-school and once the child is comfortable and learns to express himself, the teacher may introduce school language or language used in the state as medium of instruction. This will lay the foundation of language and literacy at the pre-school (3-6 years) and this goal will lead to subject-first/second language for example Hindi/state language/English.

**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. 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. 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.

## **5. Creating an Inclusive School/Classroom**

The Right to Education (RTE) Act 2009 ensures Free and Compulsory education to all children, including Children with Special Needs (CWSN). In the context of schools, provisions of the RPwD Act 2016 and RTE Act 2009, implies that all children with disabilities should be identified as early as possible, their special needs arising due to disabilities should be appropriately addressed and they should be supported to realize their full potential. The identification process of children with disabilities should begin ideally at the moment of birth.

The field realities across the country, however, provide ample instances, where children with disabilities remain unidentified, even after getting admission in school, due to lack of awareness among school functionaries and the general population. This primarily occurs in cases of disability conditions where symptoms are not evident, or have minimum, visual manifestations that can be easily identified by parents or teachers.

Disability conditions recognized by RPwD Act 2016, such as physical challenges, acid attacks, or dwarfism are easy to identify but disabilities like mental illness, specific learning disabilities, or autism are comparatively difficult and complex to identify without appropriate training.

Needless to say, the early and appropriate identification of condition/s of disability facilitates special attention for implementation of required educational intervention. This in turn can bring a meaningful difference in the lives of children with disabilities. Need based interventions that are implemented in inclusive educational settings, as early as possible helps children to grow with confidence and self-respect. As a result, children with disabilities can purposefully engage with society.

**(Source: PRASHAST, DoSE&L, MoE, GoI)**

### **Schools and teachers need to address the following challenges to ensure the inclusion and empowerment of CWSN:**

1. Changing the mindset and perception of the members of the society so as to have proper understanding of the problems of the persons with disabilities.
2. Infusing self-esteem and self-confidence in the persons with disabilities themselves so that they know that their limitations can be overcome to a large extent by self-effort and better environment.
3. Creating an accessible environment in built infrastructure, ICT eco system and other facilities and services by adopting universal designing principles through appropriate technology adoption.
4. Improving the knowledge and skills of persons with disabilities to make them capable of handling different tasks in the employment market.

5. Mobilizing the voluntary sector to actively participate in the capacity building and rehabilitation and empowerment for PwDs.
6. Providing a mechanism for greater social security coverage and other arrangements for making PwDs live with dignity.
7. Providing them with appropriate assistive devices and appliances at low cost to increase their accessibility.
8. Making all out efforts to comply with all the general principles contained in the UNCRPD.
9. Promoting Inclusive education.
10. Sensitization and awareness generation programme about the needs of PwDs for ensuring their rights.

**(Source: Draft National Policy for Persons with Disabilities, July 2022)**

## **Understanding Teaching-Learning in Inclusive Classroom**

In the framework of the teaching-learning process, teachers need to understand the tenets of inclusive education. In order to ensure that all students have the opportunity for quality and optimal learning, as well as for enjoying learning together and actively participating in educational activities, inclusive education aims to protect each student's rights and expects the system as a whole — including the school, classroom, teaching-learning strategies, and other related aspects — to change. Therefore, the teacher must employ efficient teaching-learning techniques that are appropriate for all types of students.

## **Some Teaching Strategies for Inclusive Education**

Following strategies can be used in inclusive education for optimal learning:

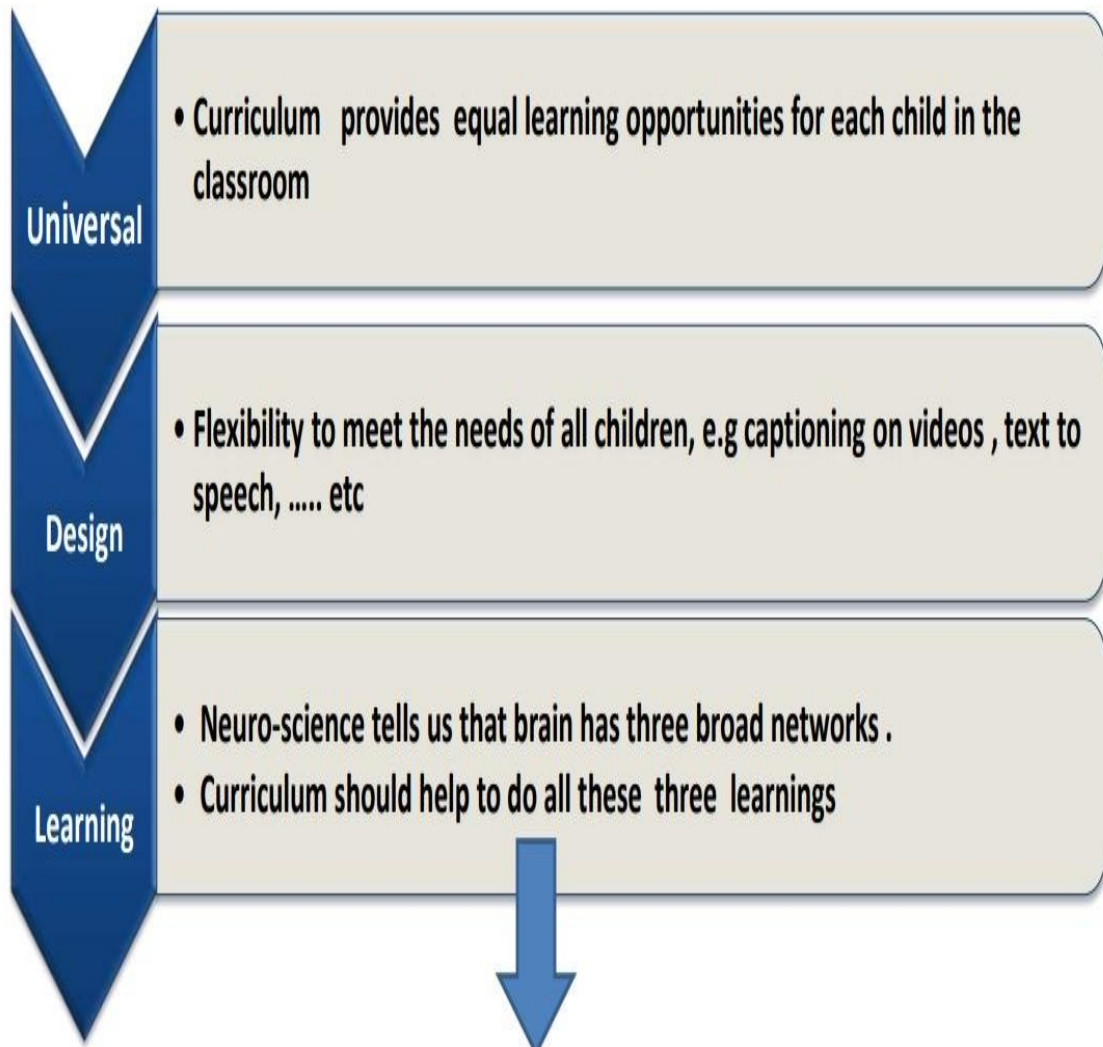
### **1. Universal Design For Learning (UDL)**

It is a teaching approach that accommodates the learning needs and abilities of all learners, and above all removes unnecessary barriers in the process of learning. In other words, it is an approach to address diversity in classroom and make it inclusive.

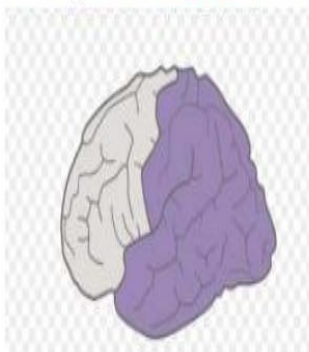
Neuro-science tells us that brain has three broad networks: **1. Recognition – The what of learning; 2. Skills and Strategies – The How of learning; 3 Caring and prioritizing – The why of learning.** Therefore, curriculum should help to do all these three learnings. Hence, UDL works on following three principles:

1. **Multiple Means of Representation.**
2. **Multiple Means for Action and expression.**
3. **Multiple Means for Engagement.**

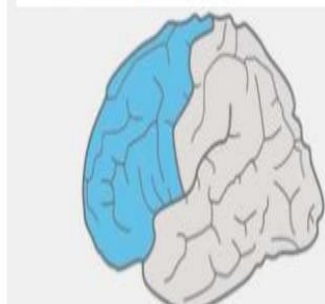
# Universal Design of Learning (UDL)



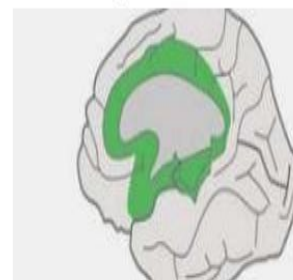
1 Recognition- The **what** of learning



2. Skills and Strategies-The **How** of learning



3 Caring and prioritising- The **why** of learning





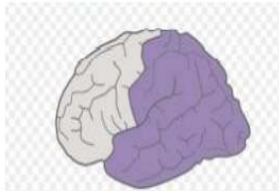
# UDL Principles

## Provide Multiple means of Representation

### Present content and information in multiple forms

- ✓ Print
- ✓ Braille
- ✓ Digital text with options for-text enlargement, screen background colour and contrast
- ✓ Text to speech
- ✓ Videos with captions,
- ✓ Audio with transcripts,
- ✓ Audio books
- ✓ Sign Language

Recognition- The **what** of learning

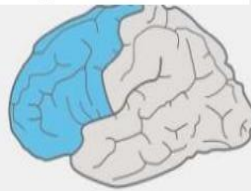


## Provide Multiple means of Action and expression

### Give students multiple options of expressing what they know

- ✓ Assignments
- ✓ Painting
- ✓ Video
- ✓ Comic strip
- Optimise access to assistive technologies
- Provide feedback

Skills and Strategies-The **how** of learning

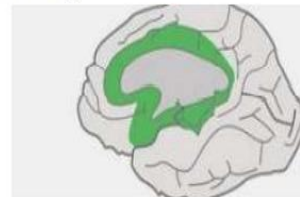


## Provide Multiple means of Engagement

### Give option that engages all students

- ✓ What fires one student won't fire up another!
- ✓ Give students choices to fuel their interests and autonomy
- ✓ Help students risk mistakes and learn from them. If they love learning they will persist through challenges

Caring and prioritising- The **why** of learning



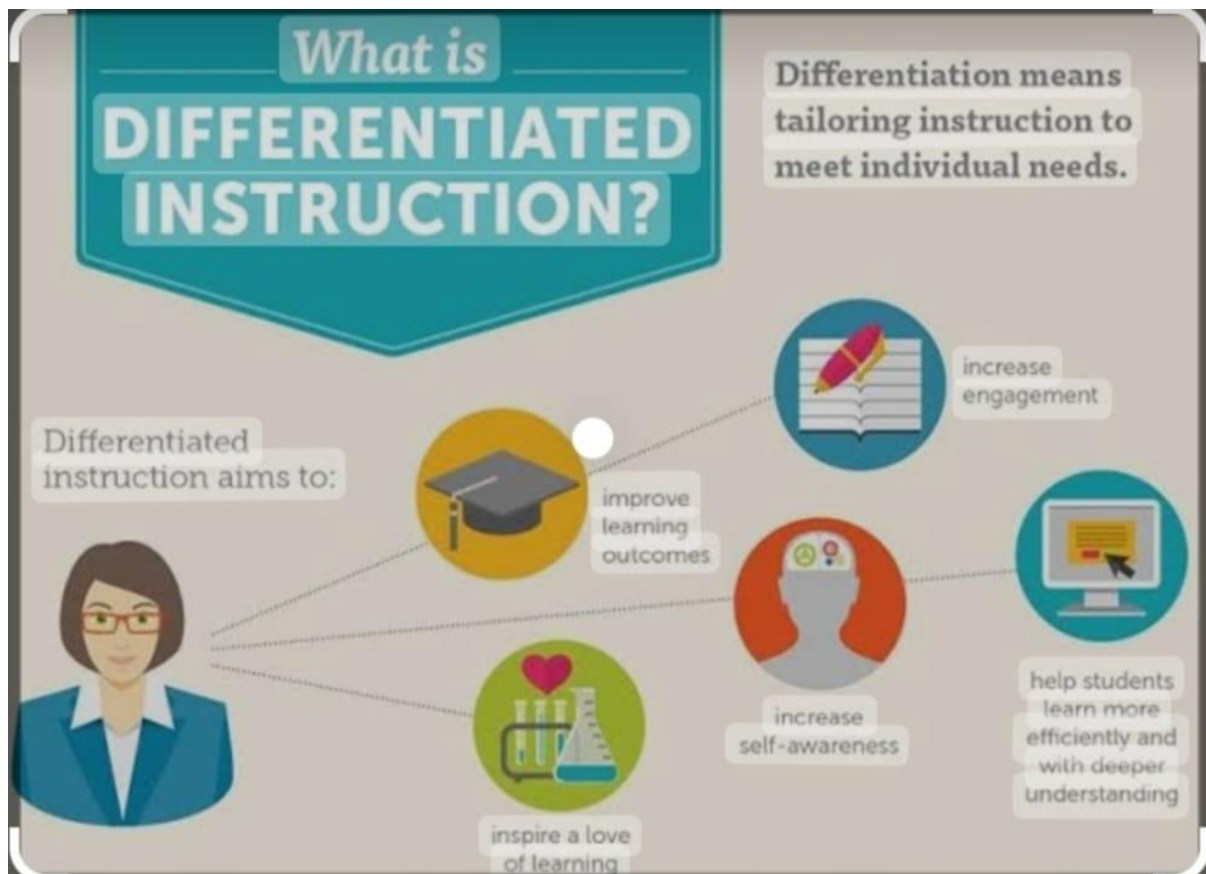
## 2. Differentiated Instruction (DI)

It is a method of instruction designed to fulfill the demands of students of various capacities in terms of learning. This makes it easier for a teacher to design and deliver lessons depending on the various strengths and weaknesses of the students in his/her classroom. DI employs flexible grouping patterns to achieve the intended results; sometimes entire class instruction takes place, and other times learners work in small groups.

Following are some pictures that illustrate differentiated instruction. The source for reference of the picture is: [teachthought.com](http://teachthought.com)

## WHY DIFFERENTIATED INSTRUCTION?

Classrooms are filled with students who:



### 3. Individualized Educational Plan (IEP)

The Individual Education Program Plan (IEP) is a written plan which is developed by the district's/zone's special education staff in consultation with the teachers, parents and other stakeholders. IEP outlines the student's academic goals and how they will be fulfilled.

Without a detailed annual plan, meeting a child's unique needs can occasionally be quite challenging. The teacher finds it more convenient to educate in the classroom when the annual goals of a student are prepared since she/he is aware of their precise demands. When multiple children's IEP goals are similar, the teacher will occasionally combine them and teach the same material to the group. However, when a student's aim is distinct from other students' goals (and not a shared goal), the teacher may organize one-on-one instruction and extend it to include activities at home (if parents can).

## Who's at the IEP Table?



- 1 The Student**

Younger students can share what they like and what they're good at in school, plus one skill that needs improvement. As they get older, they can talk about good and bad past strategies, and help with future planning and personal goals.
- 2 Parents**

Parents share a wealth of information: their child's life history, the family's culture and expectations, the student's level of functioning at home and within the community, their medical and social emotional history, and the success rate of past strategies.
- 3 Gen Ed Teacher**

General education teachers know the content of each subject area they teach, share the academic expectations for that grade or subject matter, and assist in establishing objectives that are related to the content standards.
- 4 Specialists**

Intervention Specialists are specially trained to deal with students with learning challenges. They are the primary source for developing accommodations and modifications, monitoring the child's academic programming, and reporting their goals attainment.
- 5 Administrators**

This is someone from the public school district that can authorize funds to provide the services necessary to meet a child's unique learning needs. The individual should also be knowledgeable of the general education curriculum.
- 6 Related Services**

These are SLPs, OTs, PTs, school nurses, counselors, mental health professionals, and psychologists. They often have a long-term relationship with the child and family and have seen their growth and struggles over many years.

## **6. Toy Based Pedagogy for Foundational Stage**

Toy based pedagogy at the foundational stage is where children learn through toys and games as children learn best through play and exploring play materials. Thus this module focuses on helping the learner to explore their immediate environment and the world of toys and games and practice the use of toys and games in classroom processes.

### **Toys, Games as Component of Play-based Pedagogy**

Play requires a child's active participation related to different aspects of development – social emotional, language and motor, cognitive and creativity. It gives a boost to their self-esteem. Play occurs with familiar and favourite objects which children want to explore in their own ways. Toys are such objects and tools which children love to use while playing. Thus, toy based pedagogy is a component under play-based pedagogy which is most recommended for the foundational and preparatory stage. According to Vygotsky (1967), play is helpful in the development of language and thought. Mental structures are formed through the use of signs and tools, and play helps in this formation. Play also frees the child from the constraints of the real world that surrounds the child. An educational toy is expected to educate. It should help a child to learn about a particular concept or develop a particular skill. For a child, anything can be a toy, like a piece of paper or fabric. A child loves to blow the piece of paper and watch it with curiosity.

Toys and games help in providing immense joy to all children. Toys can be classified into many categories such as rattles, dolls, classic board games, etc. Doll accessories and other toys like miniature kitchen utensils give a lot of fun in the dramatic and dolls play. Some games can be like four corners, spinning the tops like Lattoo, Firki, etc. Toys can be used as a pedagogy from preschool to higher classes. Toys also help children to connect with their culture. They also help in speed up language development especially as children get involved in making D-I-Y toys. There should be toys for all stages, i.e., foundational stage (3-8 years) and preparatory stage (8 to 11 years) and also for older children ages beyond 11. Generally, as we move higher in age, the toys overlap with games which may use some toys as props. There could be a variety of games and toys and the purpose of including them in classroom or outside classroom is to make learning more permanent and meaningful. Toy Based Pedagogy starts from a child of two to three years, the emphasis gradually progresses from sensory motor play to symbolic play as the child starts drawing more and more upon her imagination.

## **Indigenous and Traditional Games (Indoor and Outdoor)**

The popular games like ring-a ring-a-roses, Hide and Seek, tag games, circle games, simple board and card games and other games with rules are especially appealing to children of all ages from 6 to 11 years depending upon the levels of the games. From age five onwards, the children start enjoying the company of their peers, find rules of games easier to follow and feel delighted in games and challenges. The children between six to eight years of age start demonstrating their willingness to play with other children in a structured manner. They enjoy action songs and games like ‘hukkus bukkus telyi wan tsch kus, onum battoukh loddoum deygye, bol meri machli kitna paani”

**The examples given here can be adapted as per the context of the children. These have been mentioned to explain how games can be introduced to enhance learning and developing other skills and competencies.**

For the foundational stage they need a variety of balls, Hula hoops for tossing, slides and swings, seesaw, jumping rope. On the other hand, the popular traditional Indian games for preparatory stage children are – tag games, throw and catch, kho-kho, kabaddi, hopscotch and so on. These games have a lot of utility for health and well-being as well as for problem solving and manipulative skills.

### **Role of Indigenous and Traditional Toys**

We need to promote indigenous toys while using toy based pedagogy so that children can have easy and cost-effective access to them. Schools can create a ‘Toy Library or a Toy Area’. Toy as a teaching-learning resource has the potential to transform classroom pedagogy. In the pre-service teacher education curriculum and also in in-service teacher education programs, the use of indigenous toys as a pedagogic resource should be added.

### **Selection of Indigenous Toys- Important Points**

The toys should be:

- aligned with the Indian culture and ethos.
- connected with the regional culture to get the ideas of culture of the region.
- suitable to the age and development and safety of the child.



India is home to several toy clusters and thousands of artisans who produce indigenous toys which not only have cultural connect but also help in developing psychomotor and other life skills among children. The use of Indian traditional toys and games in classrooms contributes to the appreciation of indigenous products and their usefulness. Children also get introduced to Indian culture and start taking pride in their identity. This happens as a gradual process but if it starts germinating in the foundational and preparatory stage. The indigenous toys are cost effective because they are made from the locally available eco-friendly materials for instance waste clothes of tailoring units, paper toys from waste papers, cloth and rag dolls/puppets. Wood, bamboo, newspaper, waste materials are generally used in making indigenous toys and thus, this helps children to learn about the texture, colour, size and shape etc. Sometimes the local toymaker uses seeds, feathers, coconut shell, areca, nuts, etc. and here children can learn the names of the different trees and learn about their environment. The indigenous toys give them emotional satisfaction because they depict the familiar figures and the children can easily connect with them. Our indigenous games are also very popular and they keep children and adults engaged for longer duration. Such games generally promote agility, strength, balance, reflexes, hand-eye coordination, accuracy, strategy, intuition and patience along with the skills of problem solving, decision making, etc.

### **Promoting Multilingualism, Inclusion and Cultural Connect through Toy-based Pedagogy**

India is known for its culture and depiction of cultural values in the form of toys or show pieces made by clay or wood. The country has a truly glorious tradition in toys, back to 5000 years. The excavated toys and dolls found in Harappa and Mohenjo-Daro have been preserved and re-imitated in many of the Indian museums. These indigenous toys have been used by children to entertain and understand about the world around them. When choosing materials for toys, it is important to consider the children's communities and cultures. Teachers can bring elements of different languages, dress, and music into the classroom. For example, while choosing or making books/worksheets, one can use or provide scope for including different types of culture and language of the children in the classroom. Similarly, dolls, dress-up clothes, and pretend food should represent children's families and communities. Children in the classroom should be permitted to bring their toys and games in the classroom and share it with other children. Every child should be appreciated for such an effort and should be made to take pride in his/her local culture and ethos. In the same way, folk songs, dances and props used during dance should be from children's own background. The teacher may thus induce interest among children, at the foundational and preparatory stage, in incredible Indian toys and traditions. There is a need to create a child-friendly environment to implement play way, activity based and child-centered approach to education across the foundational stage and it should continue at

least till the preparatory stage of education. Teaching and learning in a very formal way does not motivate young children.

### **Creating Toys Using Low Cost/ No Cost Materials and Resources: 1**

<https://youtu.be/zAGaJia0mJ4>

### **Creating Toys Using Low Cost/ No Cost Materials and Resources: 2**

<https://youtu.be/zAGaJia0mJ4>

## **Use of Gamified e-content for Learning**

The National Education Policy 2020 recognizes the importance of technology enabled, carefully designed and well researched online and digital education. Chapter 24 of National Education Policy 2020 that is Online and Digital Education: Ensuring equitable use of Technology; page 59 point (d) states- “For fun based learning students-appropriate tools like apps, gamification of Indian art and culture, in multiple languages, with clear operating instruction, will also be created.” Keeping the spirit of NEP-2020, the well-designed digital games have been displayed on the website ([itfdigitalgames.ncert.org.in](http://itfdigitalgames.ncert.org.in)) developed by Central Institute of Educational Technology, NCERT. The website showcases curriculum based interactive digital games as per the curricular and pedagogical structure envisaged in NEP- 2020, viz., foundational, preparatory, middle & secondary. URL of the Website is: <https://itfdigitalgames.ncert.org.in>.

The broader aim is to promote utilization of educational and digital technologies in the era of online & digital learning so as to provide gamified learning experience and at the same time enhancing critical thinking, problem solving and creative thinking among students & teachers. These games ‘Digital Games’ have been conceptualized and developed for the promotion of meaningful and joyful learning experiences; acquisition of concepts and gamified assessment related to various subjects leading to immersive learning and assessment and for the acquisition of digital skills. The major highlights of the website are interactive digital games, interactive e-books, accessible ebooks (for generating awareness among the stakeholders on accessibility through a gamified experience), heritage games and virtual tours. All these provided a gamified learning experience to promote self-learning habits among learners. The use of digital play and gaming in education can help children learn many different skills; inculcate values and attitudes they will need in their future lives. This learning can range from development of fine and gross motor skills to problem solving and learning cause and effect relationships, learning how to play with others through compromise, conflict resolution and sharing, nurturing creativity and imagination and most importantly discovering their independence and positive self-esteem.



## Toy Based Pedagogy and Developmental Goals

- Implementing Toy Based Pedagogy in classrooms in all the three developmental goals

[https://youtu.be/S\\_i7VSHyukk](https://youtu.be/S_i7VSHyukk)

### Implementing TBP at Foundational and Preparatory Stage in all the three developmental goals

You need to see that every child gets ample opportunities and play materials to explore within all the three developmental goals. For example, under developmental goal-1 (children maintain good health and well-being), children must be given age and developmentally appropriate toys and play equipment to strengthen their gross and fine motor skills. The building block play area must have unifix blocks, interlocking blocks, soft blocks and so on. Dress up clothes for dolls help children to explore, investigate, and experiment. Children must also be provided with toys, games and activities that teach them self-help skills and age appropriate values like sharing, caring, keeping things back to their place, cleanliness, etc. The developmental goal-2 (children become effective communicators) requires providing a range of toys, books, materials, talking books, big books, D-I-Y books – where children create their own small books in a pair or in a small group. You can also involve children in creating easy glove and hand puppets, stick puppets, finger puppets that they might like to use as a prop during story telling/creating and also during their play in interest areas. They may also be encouraged to use these puppets during dramatisation as it enhances communication and oral expression skills. The developmental goal-3 (children become involved learners and connect with their environment) requires ample opportunities of free play with toys and materials like puzzles, shape sorters, nesting toys, objects for manipulation and classification, find me type of games, colour sorter, and so on.

#### Reflection:

1. Do you think creating a learning environment is important for play?
2. How values could be taught through toy based pedagogy?
3. How can you support children to progress towards the desired learning outcomes using the toys and play materials?
4. What do you need to find more about toy based pedagogy?
5. How can you incorporate play with toys in learning different concepts?

## **Integrating Toy and Game Based Pedagogy into FLN**

Toys enhance thinking skills that encourage children to solve simple problems and analyse the situation. Children engaged in exploring open ended materials practise skills that they would use throughout their lifetime. While children are exploring the play materials and manipulating them, it is not important what they are making or what would be the end product but the whole process of dealing with the toys, manipulating them, using as props, tools, collaborating with others, experiment, communicate, making discoveries, solving and analysing, creating are some of the skills that they would continue to develop and flourish. Children love to manipulate objects because they are curious and eager to learn by nature. When the children are taking things or parts apart, they actually want to see how the parts work together or they want to create something new. The ultimate goal behind integrating toy-based pedagogy in teaching-learning processes of foundational literacy and numeracy is to help children think critically, creatively, communicate, enjoy the developmentally appropriate books and express freely, and solve problems. In classrooms where teachers are alert to how children are using toys and what and how they are learning would help enrich mathematical explorations and support teachers in their observation and assessment. In play, with carefully selected materials by teachers, it becomes easy to target and achieve the learning outcomes and align the learning outcomes to the next stage. This would help and allow children to practise and engage in oral language and transfer it to literacy and numeracy learning. The informal activities with toys give children a head start when they start learning language and math in school. When children play and communicate through play, they are learning how language works and gaining an understanding of how to interact with other people and children connect the meaning of spoken language to written language. Traditional building toys such as building blocks, jigsaw puzzles and play with geometrical shapes make the brain more adept at understanding mathematics. Toys aid the overall development of young children. Finally, toys and educational play materials must be developmentally appropriate, culturally relevant, linked to all children's interests and aligned with the learning outcomes.

### **How to Plan for In-built Assessment for Toy Based Pedagogy?**

The assessment at the foundational stage and for early years should be nonthreatening and informal. The purpose of assessment should be to build up for the learning gaps if observed during the performance of children. As it has been discussed in the present module, toys provide opportunities to the children to learn with fun. The teachers are also suggested to assess the children while they are playing with the toys and keep in mind the learning outcomes or the key concepts which she has planned to achieve through a particular activity with the help of toy(s). It is always good if teachers develop their own methods of assessment as they are supposed to plan the learning experiences with the help of toys. Toys can be of many types and can be used

in a variety of ways. The learning outcomes that can be achieved through one activity can be across subjects and learning can take place in an integrated manner. Skills across the three developmental goals can be developed and improved using the toys in the teaching learning process. The role of teacher is to continuously observe how children are playing and also to intervene if she feels any need.

Following can be some ways to assess the children using toy based pedagogy:

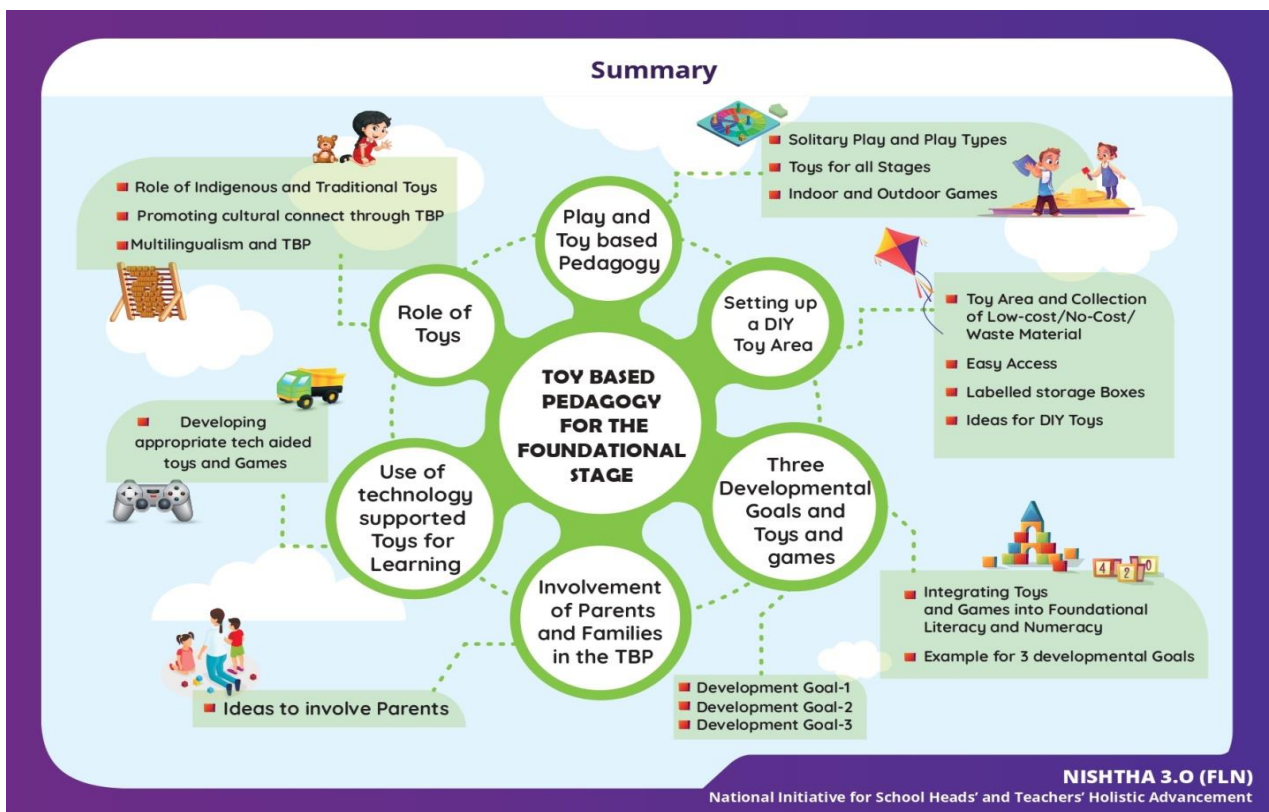
- rubrics can be developed to assess the level of proficiency
- some pictures can be taken or some video clips can be recorded to share with parents and children and give them feedback
- self-assessment and peer assessment can be introduced by asking questions while children are playing with toys.

Thus a formative assessment goes hand-in-hand with the pedagogy or teaching learning process. This kind of assessment is desirable for toy based pedagogy during early years of education. When children are playing with toys, they acquire social skills like sharing toys, agreeing on how to play together with given toy(s). Here the teacher should assess the social skills of children. Sometimes children add challenges to their games and this becomes a point of assessment on creativity and problem solving. Under toy based pedagogy children become hands-on learners. Suppose children are given bowls full of variety of objects and they are encouraged to make different patterns using them. Similarly while playing with blocks of different geometrical shapes, children may join two squares and see the rectangle or they can join two similar triangles and see one square. These examples will be helpful to learn the concept of pattern and shapes which are important concepts of foundational numeracy under FLN. Here the teacher should assess how children are doing and provide feedback spontaneously to make concepts more clear to them. She can also keep some records easy to maintain for assessing the progression in learning by the child after some time gap. Thus assessment should be an in-built part of the toy based pedagogy and teachers should have a planning for it.

### **Ideas to Involve Parents/ Families and Make them a Part of TBP**

It is on parents, to a great extent, how they help and mould their child's innate learning capability to shape a better future. Educational toys may not necessarily be the ones with alphabets or numbers. Colourful blocks and attractive puzzles are also educational toys which can facilitate learning and development of children while they are at home. Another benefit of learning from toys in the natural cosy home environment is that it does not bring any pressure to young children. Educational toys are generally designed in a way that children would not even notice that they are learning because of the fun it has. The purpose of educational toys is to promote learning through playing.

There are no age limits to introduce children to educational toys. In fact all kinds of toys can thoughtfully be linked to some age appropriate concepts. Musical instruments, connecting toys, easy jigsaw puzzles, crafty toys, boxes, blocks and dress-up toys are some of the best developmental toys that infuse creativity and problem-solving skills in children. Child's interest and their stages of development should inform choosing the right toys and games for him/her. Some of the examples where learning through toys enhances development and learning potential of the children can be mentioned here. Crafty toys and activities improve fine motor, communication and interpersonal or social skills of children. While playing puzzle game, children focus all their energy and attention to solve puzzles. With time and sustained engagement, their mind grows and they develop better problem-solving skills. Toys like dolls or doctor set may put the child through different situations that involve sharing, bonding, caring, waiting, etc. Playing thus develops their emotional intelligence as they respond to emotions such as anger, laughter or sadness. These are some of the activities with toys which can be very useful for good engagement of children with parents. However it is commonly observed in our settings that parents are searching for not only appropriate toys and activities that may help build up key concepts among children, but also for guidance and support for themselves in using toy based learning at home. Here the role of the school and teacher becomes most crucial and their support can make wonders in learning by children in early years. Parents can also be involved in classroom and school activities related to FLN where their ideas of using toys for holistic development of children can be shared with other parents and children in the classroom can be benefitted.



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<https://sudarshankhannablog.files.wordpress.com/2016/06/joy-of-making-indian.pdf>
- Gupta Arvind ., Making Things, Doing Science –  
<https://www.arvindguptatoys.com/arvindgupta/science-reporter-ag-april2013.pdf>
- Gupta Arvind Toy Treasures  
<https://www.arvindguptatoys.com/arvindgupta/4.%20AVINASH.pdf>

## Weblinks

- Problem Solving Skill for Foundational Numeracy  
- <https://www.youtube.com/watch?v=aZJ4kiVhO3U>
- Pattern Making for Foundational Numeracy  
- <https://www.youtube.com/watch?v=L4TMfJqi7Dk>
- Size and Seriation for Foundational Numeracy  
- <https://youtu.be/mORwL-ZPJ6g>
- One to One Correspondence  
- <https://youtu.be/JtLOIVWAhql>

## 7. LAKSHYA/TARGETS FOR FOUNDATIONAL LITERACY AND NUMERACY

### **Balvatika or Age 5-6**

#### **Oral Language**

1. Talks to friends and teachers.
2. Sings rhymes/poems with understanding.

#### **Reading**

1. Looks at books and attempts to read the story with the help of pictures.
2. Begins to point out and recognize some familiar repeated words (sight words or words on containers/food wrappers).
3. Recognises letters and corresponding sounds.
4. Reads simple words comprising of at least 2 to 3 alphabets to promote multilingualism.

#### **Writing**

1. Imitates act of writing during play.
2. Begins to form recognizable letters.
3. Scribbles/draws and paints for self-expression.
4. Uses a pencil and holds it properly to form recognizable letters
5. Recognizes and writes his/her own first name.

#### **Numeracy**

1. Counts objects and correlates numerals up to 10.
2. Recognizes and reads numerals up to 10.
3. Compares two groups in terms of the number of objects and uses words like more than/less than/equal to, etc.
4. Arranges numbers/objects/shapes/occurrence of events in a sequence.
5. Classifies objects based on their observable characteristics and communicates the criteria of classification.
6. Uses vocabulary for comparative words like longer, longest, taller, tallest, shorter, shortest, heavier than, lighter than etc. in the context of different objects around him/her.

## **Class I or age 6-7**

### **Oral Language**

1. Converses with friends and class teacher about her needs, surroundings.
2. Talks about the print available in the classroom.
3. Recites rhymes/poems/songs with action.

### **Reading**

1. Participates during read-aloud/storytelling session in an active way and answers questions during and after story session; acts out the familiar story with props and puppets.
2. Uses sound-symbol correspondence to write words with invented spellings e.g: writes “knock as nok and cup as kup”.
3. Reads small sentences consisting of at least 4-5 simple words in an age-appropriate unknown text.

### **Writing**

1. Develops familiarity with matras (Hindi)/aerab (Urdu)/zaban nishini (Kashmiri) in the words occurring in familiar contexts (story/poems/environment print etc.)
2. Writes, draws, and /or makes things to convey meaning and represent names on her/his worksheet, greeting messages, draws pictures that are recognizable objects/people.

### **Numeracy**

1. Counts objects up to 20.
2. Reads and writes numbers up to 99.
3. Using addition and subtraction of numbers up to 9 in daily life situations.
4. Observes and describes physical properties of 3D shapes (solid shapes) around him/her like round/flat surfaces, number of corners and edges, etc.
5. Estimates and verifies length using non-standard, non-uniform units like hand span, footstep, fingers, etc. and capacity using non-standard uniform units like cup, spoon, mug etc.
6. Creates and recites short poems and stories using shapes and numbers.

## **Class II or age 7-8**

### **Oral Language**

1. Converses and talks about the print available in the classroom.
2. Engages in conversation to ask questions and listens to others.
3. Recites songs/ poems.
4. Repeats familiar words occurring in stories/poems/print, etc.

### **Reading**

1. Reads and narrates/re-tells the stories from children's literature/textbook.
2. Makes new words from the letters of a given word.
3. Reads age-appropriate unknown text of 8-10 sentences with simple words with appropriate speed (approximately 45 to 60 words per minute correctly) comprehension, and clarity.

### **Writing**

1. Writes short/simple sentences correctly to express herself.
2. Recognizes naming words, action words and punctuation marks.

### **Numeracy**

1. Reads and writes numbers up to 999.
2. Uses addition and subtraction of numbers up to 99, sum not exceeding 99 in daily life situations.
3. Performs multiplication as repeated addition and division as equal distribution/sharing and constructs multiplication facts (tables) of 2, 3 and 4.
4. Estimates and measures length/distance/capacity using non-standard uniform units like rod, pencil, thread, cup, spoon, mug, etc. and compares weight using simple balance.
5. Identifies and describes 2-D shapes like rectangle, triangle, circle, oval, etc.
6. Uses spatial vocabulary like far/near, in/out, above/below, left/right, front/behind, top/bottom etc.
7. Creates and solves simple riddles using numbers and shapes.



## **Class III or age 8-9**

### **Oral Language**

1. Converses with clarity using suitable vocabulary in home/ school language.
2. Talks about the print available in the classroom.
3. Engages in conversation to ask questions, narrate experiences, listens to others, and respond.
4. Recites poems individually and in group with intonation and modulation of voice.

### **Reading**

1. Finds information in familiar books/textbooks.
2. Reads at least 60 words per minute correctly and with comprehension depending on the language and with correct pronunciation from an age-appropriate unknown text.
3. Reads and follows instructions given in the text.
4. Can answer at least 3 out of 4 questions based on reading of an age-appropriate unknown story/paragraph of 8-10 sentences.

### **Writing**

1. Writes short messages for different purposes.
2. Uses action words, naming words and punctuation marks for writing.
3. Writes grammatically correct sentences.
4. Writes short paragraph and short stories on her/his own with grammatically correct sentences.

### **Numeracy**

1. Reads and writes numbers up to 9999.
2. Solves daily life problems using addition and subtraction of numbers up to 999, sum not exceeding 999.
3. Constructs and uses multiplication facts (tables) of numbers 2 to 10 and uses division facts.
4. Estimates and measures length/distance, weight and capacity using standard units like m, km, g, kg, litres etc.
5. Identifies and relates basic 2D shapes with 3D shapes (solid shapes) and describes their properties like faces, number of edges and corners, etc.
6. Identifies a particular date and corresponding day on a calendar; reads time on a clock in hours and half-hours.
7. Identifies half, one-fourth, three-fourth of a whole and in a collection of objects.
8. Identifies, extends, and communicates rules for simple patterns on numbers, events, and shapes.

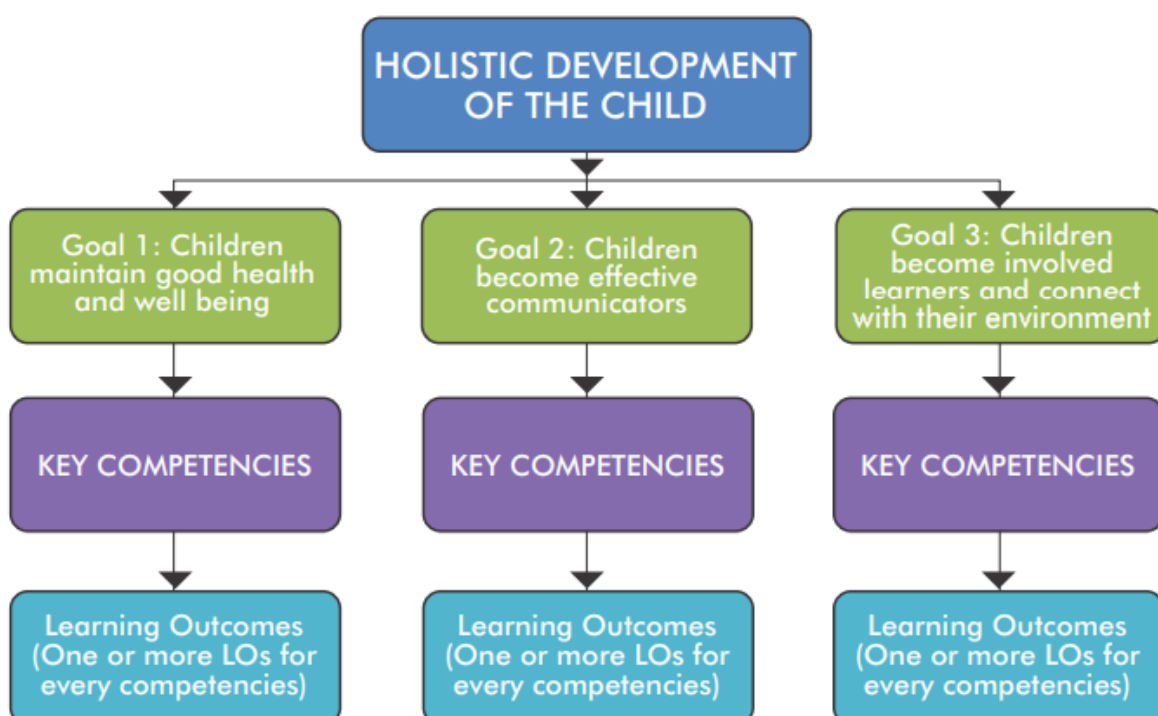
## 8. Codification of Learning Outcomes

### *Understanding the linkage between developmental goals, competency and learning outcomes*

**DEVELOPMENTAL GOALS:** 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. These developmental aspects make child competent to deal with complex life situations. All these domains have been subsumed into three major goals for holistic development of the child.

**COMPETENCY :** Competencies are statements that specify what children will know, be able to do, or be able to demonstrate when they have completed or participated in a course or program.

**LEARNING OUTCOMES:** LOs are essentially evidence of having acquired competencies. Learning outcomes are specific statements that describe exactly what a student will be able to do in a measurable way. There may be more than one measurable outcome defined for a given competency.



# Developmental Goal 1

## CHILDREN MAINTAIN GOOD HEALTH AND WELL-BEING (HW)

### KEY COMPETENCIES:

- Awareness of self
- Development of positive self-concept
- Self-regulation
- Decision-making and problem solving
- Development of pro-social behavior
- Development of healthy habits, hygiene, sanitation and awareness for self-protection
- Development of gross motor skills
- Development of Fine motor skills and eye-hand coordination
- Participation in individual and team games and sports

Hw1 Preschool 1	Hw2 Preschool 2	Hw3 Preschool 3	Hw4 Class 1 (BALVATIKA)	Hw5 Class 2	Hw6 Class 3
HW1.1 Begins to state some physical characteristics about self	HW2.1 Describes self in terms of physical characteristics	HW3.1 Describes self and others in terms of physical characteristics, gender, interests, likes, dislikes	HW4.1 Recognises different body parts and uses various body movements	HW5.1 Maintains correct posture, uses various body movements to participate in games and sports	HW6.1 Participates in games and sports to strengthen and extend gross motor skills
HW1.2 Identifies close family members	HW2.2 Identifies close family members, friends and neighbours	HW3.2 Exhibits understanding of relationship Preschool with extended family members	HW4.2 Demonstrates love and respect for immediate and extended family and neighbours	HW5.2 Demonstrates care and respect for immediate and extended family, friends, neighbours and pets	HW6.2 Demonstrates care and respect for immediate and extended family, friends, neighbours, pets and surroundings
HW1.3 Participates in the activities and takes initiative	HW2.3 Expresses own preferences and interests	HW3.3 Demonstrates independence in activities	HW4.3 Takes part in exercise, play and movements for fun and exercise	HW5.3 Follows rules and enjoys movement and rhythm, participates in play activities	HW6.3 Takes initiative, participates in all group and individual games, follows rules and cooperates in team

HW1.4 Waits for their turn and follows simple instruction with teachers support	HW2.4 Waits for their turn and follows two-line simple instructions	HW3.4 Follows instructions and simple rules at the same time	HW4.4 Follows three to four instructions/ rules at a given time	HW5.4 Follows complex instructions/rules; Starts creating their own rules	HW6.4 Follows complex instructions/rules; frames their own rules for invented games and activities
HW1.5 Seeks adult help in adjusting to new environment	HW2.5 Makes adjustment in the classroom and with other children	HW3.5 Shows adaptability to any changes in routine/daily schedule	HW4.5 Shows adaptability to any changes in routine, makes adjustment	HW5.5 Adjusts to any changes in the routine and asks others to follow the same	HW6.5 Demonstrates leadership qualities and suggest ideas for changes in daily routine
HW1.6 Chooses an activity area and gets engaged in the activity	HW2.6 Shows focus on a self-selected activity or task to completion	HW3.6 Focuses attention to complete tasks/topics assigned by others	HW4.6 Shows increased attention span; chooses and completes an activity started	HW5.6 Shows increased attention span and persistence in tasks	HW6.6 Concentrates on more complex projects and completes tasks even with a few interruptions
HW1.7 Identifies her/his feelings wants and causes, e.g., "I don't want to colour today". "I want to go out".	HW2.7 Describes her/his feelings and their causes, e.g., "I am angry because he broke my block tower".	HW3.7 Expresses emotions through verbal and non-verbal modes (gestures, drawings)	HW4.7 Expresses her/his emotions in socially approved ways, e.g., "stops crying and explains why s/he was crying	HW5.7 Copes with emotions appropriately in varied situations	HW6.7 Manages emotions appropriately in challenging situations
HW1.8 Makes choices and expresses preferences	HW2.8 Expresses own preferences, interests and makes choices	HW3.8 Takes responsibility and makes choices based on own preferences and interests	HW4.8 Plays/participates in activities, makes friends according to their own choice, preference and interest	HW5.8 Selects games/ play equipment according to their own choice, preference, and interest	HW6.8 Chooses and continues playing and practice of games/sports activities of their own choices and interest
HW1.9 Resolves minor conflicts with the help of adults	HW2.9 Suggests solutions to conflicts (with the support of adults)	HW3.9 Suggests solutions to conflicts and makes age-appropriate adjustments.	HW4.9 Deals with minor conflicts that arise during play or activity and suggests solutions	HW5.9 Resolves minor conflicts independently or with the help of teacher or adults	HW6.9 Takes care that conflict does not arise during play or activities, makes rules beforehand, resolves minor conflicts independently or with the help of adults
HW1.10 Expresses joy while working and playing with other children	HW2.10 Plays cooperatively with other children and makes plan for	HW3.10 Demonstrates willingness to include other's ideas during interaction and	HW4.10 Plays or works cooperatively and enjoys playing/ working with others, involves	HW5.10 Enjoys playing with other children, follows rules and demonstrates leadership/	HW6.10 Exhibits pleasure in working, learning and playing together. Observes rules in

	what and how they will play	play	all and takes initiative in framing rules for games or play activities	initiative as and when required	games (individual and group) and other collective tasks
HW1.11 Helps other children, cares, and shares belongings with them	HW2.11 Shows caring behaviour (hugs, pats) and shares belonging with other children	HW3.11 Helps peers who are in need during large and small group activities	HW4.11 Extends help, cares and shares play and learning material	HW5.11 Shows team spirit, teaches games and sports activities to other children in group	HW6.11 Exhibits care, affection for team members, plays with others and cooperates in a team
HW1.12 Begins to understand differences among people (based on ethnicity, culture, and abilities and disabilities) and demonstrates sensitivity to diversity	HW2.12 Demonstrates sensitivity and acceptability towards children from diverse backgrounds including children with special needs	HW3.12 Demonstrates sensitivity and acceptability towards children from diverse backgrounds including children with special needs	HW4.12a Shows cooperation in group activities,  HW 4.12b Respects other rights and culture, diversity, sensitive to special needs	HW5.12 Exhibits acceptance and tolerance towards differences among people and demonstrates sensitivity to diversity	HW6.12 Demonstrates respect for others, their culture, food, festivals , etc., sensitive to others needs, shows tolerance, acceptability, etc.
HW1.13 Communicates immediate needs and follows hygiene and healthy eating practices with adult's guidance	HW2.13 Demonstrates hygiene and sanitation practices and healthy eating practices with adult's guidance	HW3.13 Maintains and displays basic health, hygiene, sanitation practices and healthy eating practices with increased independence	HW4.13a Maintains hygiene and cleanliness and healthy eating practices independently	HW5.13a Demonstrates proper use of toilet, cleanliness after toilet uses and exhibits cleanliness (self and environment), hygiene and healthy eating practices	HW6.13a Maintains cleanliness of classrooms, playground, toilets and bathrooms, home, room, utensils, and proper management of garbage
			HW4.13b Identifies locally available food items, avoids wastage and understands the importance of food and water as a source of energy for work and play	HW5.13b Identifies the locally available, variety and different tastes, shows awareness about seasonal food items, vegetables, fruits, etc.	HW6.13b Shows awareness of constituents of food (energy, body building, protection) items, implications of junk food, frequency of taking food
					HW6.13c Demonstrates importance of including a variety of food items in diet and frequently eating balanced diet

HW1.14 Maintains distance from strangers and is aware about good touch and bad touch (guidance from parents and teachers)	HW2.14 Demonstrates awareness about good touch and bad touch (with guidance from parents and teachers)	HW3.14 Demonstrates awareness about good touch and bad touch and maintains distance from strangers	HW4.14 Exhibits awareness about good touch and bad touch and expresses their feelings with trusted adults and maintains distance from strangers	HW5.14 Exhibits awareness and complains about bad touch and maintains distance from the strangers	HW6.14 Demonstrates awareness about personal safety and reports to teacher or others, parents about any bad touch/behavior noticed, maintains distance and tells others to be safe
HW1.15 Recognises common dangers and hazardous objects and places and keeps Preschool distance	HW2.15 Recognises common dangers/ hazards and takes safety precautions	HW3.15 Follows basic rules of safety at home, preschool and playground	HW4.15 Identifies common hindrances to safe play or common mishaps at school, playground, road, and home, takes measures to prevent such accidents	HW5.15 Reports to the teacher in the event of injury and/ or sickness in school (classroom/ playground) and reports to the elders in the event of injury and/ or sickness	HW6.15 Reflects and reports to the responsible adult; Demonstrates supportive behaviors to soothe peers in case of injury/mishap/ sickness
HW1.16 Demonstrates gross motor coordination in play/ routine activities like walking, running, jumping, climbing, dancing, etc.	HW2.16 Demonstrates gross motor coordination and control in play activities involving walking, running, jumping, climbing, etc.	HW3.16 Demonstrates gross motor skills with greater coordination, control and strength for e.g., running, jumping, throwing, kicking, and catching skills, etc.	HW4.16 Displays strength, judgment and decision-making in gross motor skills	HW5.16 Demonstrates eye-hand and neuromuscular coordination and motor fitness and develops strength, judgment and decision-making	HW6.16 Demonstrates neuromuscular coordination, coupling of movements, e.g. Can combine walk and run, sit and stand, run forward and backward running
HW1.17 Explores and participates in music, dance, and creative movements	HW2.17 Explores and participates in music, dance, and creative movements	HW3.17 Explores space and participates actively and creatively in music and movement activities	HW 4.17 Participates actively in music, dance and creative movements like role play, dramatization, etc.	HW5.17 Takes initiative in creative activities, dance, music, drama, role play, mimicry, imitation, etc.	HW6.17 Involves/ Participates/Takes initiative/shows leadership in music and movement activities, role play, dramatization, simulation, mimicry, etc.
HW1.18 Exhibits fine motor skills and simple eye-hand coordination in various activities like scribbling, printing, threading,	HW2.18 Exhibits fine motor skills and performs tasks that require more complex eye-hand coordination such as cutting out shapes, free	HW3.18 a Exhibits fine motor skills with precision and control.	HW4.18 a Displays fine motor skills with accuracy and control, engages in art integrated activities/drawing/ colouring, collage making, etc.	HW5.18 a Shows precision in fine motor activities, drawing, colouring, writing, etc.	HW6.18 a Demonstrates precision in fine motor activities, drawing, colouring, writing, etc.

<p>colouring, clay moulding, tearing and pasting, etc.</p>	<p>hand drawing, colouring, threading beads, stringing, copying, tearing, pasting, lacing, etc., with moderate levels of precision and control.</p>	<p>HW3.18 b Uses coordinated movements to complete complex tasks like cutting along a line, pouring, buttoning</p> <p>HW3.18 c Uses a pincer grip (coordination of the index finger and thumb to hold an item) to hold and manipulate tools for drawing painting and writing</p>	<p>HW4.18 b Uses coordinated movements for using scissors, buttoning, shoe lacing, writing,</p> <p>HW4.18 c Grips pencil correctly, uses smooth, controlled finger and hand movements that also require eye-hand coordination (e.g., pours water into a water bottle with a small opening with little spillage, traces shapes)</p>	<p>HW5.18 b Uses coordinated movements while using writing/colouring tools.</p> <p>HW5.18 c Demonstrate control and appropriate pressure when using writing and drawing tools</p>	<p>HWD6.18 b Uses coordinated movements while using writing/colouring tools</p> <p>HWD6.18 c Manipulates grade-appropriate tools and intricate materials with control and precision (e.g., cut and handle small pieces of paper to make a mosaic, keyboarding skills)</p>
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# Developmental Goal 2

## CHILDREN BECOME EFFECTIVE COMMUNICATORS (EC)

### KEY COMPETENCIES<sup>26</sup>:

Talking and Listening	Reading with comprehension	Writing with purpose
<ul style="list-style-type: none"> <li>• Listening with comprehension</li> <li>• Creative Self Expression and Conversation</li> <li>• Language and Creative thinking</li> <li>• Vocabulary Development</li> <li>• Conversation and talking skills</li> <li>• Meaningful uses of language</li> </ul>	<ul style="list-style-type: none"> <li>• Bonding with Books</li> <li>• Print Awareness and Meaning Making</li> <li>• Pretend Reading</li> <li>• Phonological Awareness</li> <li>• Sound Symbol Association</li> <li>• Prediction and use of previous experiences with knowledge.</li> <li>• Independent reading for pleasure and various purposes.</li> </ul>	<ul style="list-style-type: none"> <li>• Early literacy skills</li> <li>• Writing for self-expression</li> <li>• Make use of her/his knowledge of letter and sounds, invents spellings to write.</li> <li>• Make efforts to write in conventional ways</li> <li>• Response to reading with drawings/words and meaningful sentences</li> <li>• Writing of rhyming words</li> <li>• Write meaningful sentences using naming words and action words</li> <li>• Write messages to express themselves</li> <li>• Using mixed language codes</li> <li>• Write for different purposes in the classroom's activities and at home, such as making list, writing greeting to grandparents, messages/ invitation to friends, etc.</li> </ul>

<sup>26</sup>\*ECL1 -First language- It may be noted that the goals suggested for first language, can be implemented for the mother tongue/first language/regional language of the child. For instance, Tamil, Telugu, Khasi, Gondi languages , etc. could be the first language of the child. The examples are drawn from child's literature and textbooks in Hindi language.

\*\*ECL 2: Exposure to Second Language - Any other Indian language/ English could be the second language of the child, therefore, the goals suggested for the English, may be considered for the second language.

FIRST LANGUAGE					
ECL1 Preschool 1	ECL2 Preschool 2	ECL3 Preschool 3 (BALVATIKA)	ECL4 CLASS 1	ECL5 CLASS 2	ECL6 CLASS 3
ECL1 1.1 a Attempts to engage in conversation/ small talk with known/unknown children/adults in their own language/ home language.  ECL1 1.1 b Attempts to understand gestures, signs, expression while talking/interaction.	ECL1 2.1 Attempts to engage in conversation in school and home with unfamiliar teachers, new friends, school staff, other adults, etc.	ECL1 3.1 Engages in conversation in school and home with unfamiliar teachers, new friends, school staff, other adults, etc. in their own language.	ECL1 4.1 Uses own language/school language to express their needs and ask questions to gain information.	ECL1 5.1 Uses school language to express opinion, ask, question for different purposes.	ECL1 6.1 Uses school language/own language to express their likes-dislikes, responses to familiar incidents/events/ radio/ TV programs.



ECL1 1.2 Observes with interest illustrated books/posters with big font.	ECL1 2.2 Observes with interest and talks about available children's literature in class with friends.	ECL1 3.2 Selects book from reading corner/reading area and attempts to understand the story with the help of pictures and can predict the written text.	ECL1 4.2 Selects book from reading corner/reading area and talks about/narrates, story with the help of the pictures.	ECL1 5.2 Talks about the characters from the familiar story. Draws the picture and write, the name of their favourite character.	ECL1 6.2 Extends the story/poem while narrating orally.
ECL1 1.3a Expresses likes-dislikes with gestures/body language. ECL1 1.3b Expresses fondness/liking for animals/birds in their surroundings-plays and talk with them.	ECL1 2.3 Makes various sounds/words for play- for example using pencil as a train/scooter and makes sounds like an engine/horn.	ECL1 3.3 Expresses their experiences of reading poems/stories in their own language and talks about it and shares it with friends.	ECL1 4.3 a Connects personal experiences with the read/familiar stories in their own language and talks about them.	ECL1 5.3 a Narrates stories and recites poems in their own language using their own style/way.	ECL1 6.3 a Connects familiar material for example poem, story, poster, advertisement in their surrounding with their experiences while conversing.
			ECL1 4.3 b Makes some rules for their favourite games.	ECL1 5.3 b Participates in class/school activities programs , etc.	ECL1 6.3 b Converses, asks questions, expresses opinion about characters, theme, pictures of the familiar texts like- story/poem , etc.
				ECL1 5.3 c Narrates story/ recites poem of his/her own choice.	ECL1 6.3 c Talks about the activity like- morning message, conversation with family members etc. and illustrates, writes a few words about their favourite activity in copy/board/ display board
ECL1 1.4 a Recites repeatedly interesting poem/songs with actions. Participates in rhythmic activities.  ECL1 1.4 b Sings/hums	ECL1 2.4 Sings/recites interesting poems with action, participates in rhythmic activity.	ECL1 3.4 a Uses appropriate intonation and modulation of voice while reciting interesting poems/songs in their own language. ECL1 3.4 b Recites with fluency	ECL1 4.4 Identifies rhyming words in familiar poems and songs and creates new rhyming words.	ECL1 5.4 Creates rhyming words and words with similar sounds, orally, in writing from the familiar poems and songs.	ECL1 6.4 a Narrates interesting and humorous story, poem etc. with appropriate modulation of voice, speed, fluency, and style appropriate to the narration. ECL1 6.4 b

rhyiming words/sentences from familiar poems and stories.		with appropriate intonation parts of familiar poems in their own language.			Solves riddles, takes interest in language games, songs while understanding the rhythm.
ECL1 1.5 Picks selected books with curiosity and interest. Flips over pages to make sense of it.	ECL1 2.5 Attempts to understand the flow and directionality of the print during the read aloud sessions.	ECL1 3.5 a Gives their favourite story books to the teacher to narrate the story. ECL1 3.5 b Observes attentively the objects in the pictures, talks about them and write their name by using invented spellings.	ECL1 4.5 Predicts and attempts to make meaning of the text (textbooks and children's literature) by turning over the pages back and forth.	ECL1 5.5 a Predicts and reads textbooks and children's literature in familiar context.  ECL1 5.5 b Expresses their responses, likes-dislikes, and asks questions.  ECL1 5.5 c Attempts to read familiar and unfamiliar text and talks about it. For example- predicts with the help of print and pictures, sound-symbol association, identifying the words with the use of prior knowledge and experiences.	ECL1 6.5 a Relates unfamiliar words from different texts while reading and understanding the story. ECL1 6.5 b Reads and tells the numbers written on the pages of the books. For example – page no. 45,76,21 ECL1 6.5 c Reads with understanding different texts (newspaper, children's magazine, etc.) and writes about them in brief.
ECL1 1.6 Exhibits skills of early literary and print awareness in the class/home. For example- recognizing/ reading the wrapper of their favourite toffee or biscuit.	ECL1 2.6 a Recognizes, labels , etc. for example- sign/symbol of ambulance. ECL1 2.6 b Identifies own name in writing	ECL1 3.6 a Reads with the understanding of print awareness.  ECL1 3.6 b Reads the story by understanding/ arranging the pictures in the sequence of events.	ECL1 4.6 Relates the picture with the text to predict and understand.	ECL1 5.6 Understands events and characters in a picture story/storyboard (story books) and writes about them. (Conventional writing)	ECL1 6.6a Identifies the features of language (naming words, action words, repetition, punctuation marks) in different stories/poems/ texts. ECL1 6.6 b Makes use of naming words, action words, repetition, and punctuation marks while writing. ECL1 6.6 c Reads with appropriate flow, intonation, voice modulation, familiar written texts

					(Mid-day meal chart, class name, title of favourite book, etc.)
ECL1 1.7 Listens attentively and repeats familiar words and their sounds.	ECL1 2.7 Identifies a particular sound in different words for example- 'n' sound in name, mail, net.	ECL1 3.7 Identifies repeated sounds in words occurring in familiar stories/poems.	ECL1 4.7 Talks about birds, animals in their surroundings (home, school, neighbourhood) and writes a few words about them by using invented spelling/conventional writing.	ECL1 5.7 Talks about characters, events based on the stories poems and other texts.	ECL1 6.7 a Participates and converses in the activities like - morning message, and ECL1 6.7 b Illustrates in copy/board/display board (Haripatti/green strips) etc. and talks about their favourite activity
ECL1 1.8 Identifies the various familiar sounds in the surroundings for example- sound of the falling rain, chirping of the birds etc.	ECL1 2. 8 Listens and identifies repeatedly occurring events in familiar stories, poems, etc.	ECL1 3. 8 a Identifies repeated sounds, words etc. in stories, poems, songs.  ECL1 3. 8 b Predicts about the written text with help of pictures and print, previous experiences and information, letter-sound association, etc.	ECL1 4. 8 Shows awareness of figures of letters and sounds while reading story, poems and make use of it while writing.	ECL1 5. 8 Writes making use of appropriate words/sentences (conventional writing) and different forms of expressions.	ECL1 6.8 Writes about familiar texts in different forms of expressions about themes, events, characters, title, etc.
ECL1 1.9 Attempts to write by drawing lines, scribbling.	ECL1 2.9 Expresses by drawing symbolic pictures, paying attention to figures colours, size, etc. and talks about it.	ECL1 3.9 Takes interest in writing (invented spellings) own name, names of their friends and objects around them.	ECL1 4.9 Labels the self-drawn pictures and the pictures made available to them. (Invented spellings)	ECL1 5.9 Extends the story in writing using imagination and creativity.	ECL1 6.9 Writes short messages for example- I have lost my blue cycle. Inform me if someone has seen/found it.

SECOND LANGUAGE					
ECL2 Preschool 1	ECL2 Preschool 2	ECL2 Preschool 3 (BALVATIKA) 5-6 Years	ECL2 CLASS 1	ECL2 CLASS 2	ECL2 CLASS 3
ECL2-1.1 Participates in singing poems, rhymes.	ECL2-2.1 Attends Participates and listens to others during conversation	ECL2-3.1 Introduces himself/herself bilingually.	ECL2-4.1 a Listens to English words, greetings, polite forms of expression, and respond in English/home language like 'how are you?', 'I'm fine; thank you, etc.	ECL2-5.1 a Expresses verbally her or his likes/dislikes about the characters, storyline, etc., in English or home language.	ECL2-6.1 a Asks questions about the story and characters in the story, in English/home language.
			ECL2-4.1 b Talks about the available print in the classroom.	ECL2-5.1 b Follows simple instructions such as 'Shut the door', 'Bring me the book' and such others.	ECL2-6.1 b Develops vocabulary from their classroom and social environment.
ECL2-1.2 Participates in music and movement activities	ECL2-2.2 Sings short poems and rhymes	ECL2-3.2 Sings songs or rhymes with action.	ECL2-4.2 Sings and recites poems rhymes and draws pictures	ECL2-5.2 Sings songs or rhymes with action. forms new rhyming words.	ECL2-6.2 Recites poems individually/ in groups with intonation and fluency.
ECL2-1.3 Enjoys listening to stories bilingually	ECL2-2.3 Listens to the picture stories with bilingual text	ECL2-3.3 Flips over the pages of bilingual work in the reading area	ECL2-4.3 Picks the story book from the reading area and tries to read the pictures.	ECL2-5.3 Predicts the story, talks about the characters bilingually.	ECL2-6.3 Talks about his/her favourite story book/character.
ECL2-1.4 a Spends time in reading area/ play area. ECL2-1.4 b Looks/explore books, posters/ available material	ECL2-2.4 Takes interest in bilingual books and talks about them bilingually	ECL2-3.4 Attempts to respond using familiar words and expressions	ECL2-4.4 Responds orally to questions related to stories/poems bilingually.	ECL2-5.4 Responds to the questions related to stories and poems, in home language or English or sign language, orally and in writing (phrases/ short sentences).	ECL2-6.4 Participates in role play/skit in English/bilingually with appropriate expressions.
ECL2-1.5 Identifies familiar sounds in the environment	ECL2-2.5 Identifies few letters and sounds	ECL2-3.5 Recognises letters and corresponding sounds	ECL2-4.5 Forms letters correctly, uses sound-symbol correspondence to write invented spellings.	ECL2-5.5 Shares orally about events such as festival celebrated in the neighbourhood bilingually.	ECL2-6.5 Writes words/ sentences to express his/her feelings. Draws about the same as well.

ECL2-1.6 Spends time in reading area/ play area.	ECL2-2.6 Recognizes labelled objects, names, etc	ECL2-3.6 Attempts to read familiar signs	ECL2-4.6 Recognises familiar signs, logos and labels in the environment.	ECL2-5.6 Recognises and writes/draws frequently occurring word/ picture in a story being read.	ECL2-6.6 Reads print in the classroom/ school environment: poems, posters, charts, etc.
ECL2-1.7 Expresses liking for a few books.	ECL2-2.7 Pick's picture books, talks about posters.	ECL2-3.7 Predicts story with the help of the pictures	ECL2-4.7 Connects text with illustrations while reading the story.	ECL2-5.7 Tries to decode unfamiliar words while reading.	ECL2-6.7 Reads small texts in English.
ECL2-1.8 Explores the reading area and shows interest in books.	ECL2-2.8 Flips over pages of story books and attempts to read on his/her own	ECL2-3.8 Participates in shared reading of the story	ECL2-4.8 Creates her/his own story by writing a few words mixing codes.	ECL2-5.8 Creates a poster on their self-created story.	ECL2-6.8 Narrates the story with the help of the poster.
ECL2-1.9 Pretend plays with toys.	ECL2-2.9 Shares toys with friends and pretend- plays.	ECL2-3.9 Talks about his/ her favourite toy.	ECL2-4.9 Brings the toy and introduce them in the class.	ECL2-5.9 Draws a poster showing his/her feelings for the toy.	ECL2-6.9 Writes a message for the toy. E.g, you are my best friend.
ECL2-1.10 Sings/hums words/lines/parts of songs and rhymes, in own language/L2.	ECL2-2.10 Identifies rhyming a few words	ECL2-3.10 Enjoys and creates non sensical rhyming words.	ECL2-4.10 Creates rhyming words based on the available text.	ECL2-5.10 Writes selective rhyming words in pair.	ECL2-6.10 Uses rhyming words for writing short sentences.
ECL2-1.11 Scribbles with crayons.	ECL2-2.11 Draws pictures depicting some event/situation / feelings for friend, parents, sibling, etc.	ECL2-3.11 Attempts to scribble/write a few familiar words.	ECL2-4.11 Writes words beginning with the same letter.	ECL2-5.11 Uses words related to size, shape, colour, weight, texture such as 'big', 'small', 'round', 'pink', 'red', 'heavy', 'light', 'soft' etc.	ECL2-6.11 Writes sentences using the familiar words.
ECL2-1.12 Collects objects from their immediate environment e.g., leaves, twigs, pebbles, feather etc. and talks about them bilingually.	ECL2-2.12 Observes and talks about the posters and other print in the classroom.	ECL2-3.12 Identifies objects in their immediate environment	ECL2-4.12 Labels the objects such as furniture /mat/ blackboard/ reading area, etc.	ECL2-5.12 Read texts other than the textbooks such as children's magazine, etc.	ECL2-6.12 Writes short messages bilingually adding drawing, etc.
ECL2-1.13 Watches cartoon/ films for a short duration	ECL2-2.13 Enjoy watching favourite cartoon/films	ECL2-3.13 Enjoy watching age-appropriate cartoon/films	ECL2-4.13 Shares their likes about the cartoon/film.	ECL2-5.13 Writes small sentences about the cartoon/film. Writes small sentences about self-using full stop.	ECL2-6.13 a Writes small sentences using full stop and question marks.

					ECL2-6.13 b Writes briefly about their visit to their hometown /park nearby/ market bilingually.
ECL2-1.14 Participates in singing songs and rhymes	ECL2-2.14 Sings short songs/ rhymes about birds/ trees animals, etc.	ECL2-3.14 Shares feelings for birds/ animals /trees	ECL2-4.14 Describes their thoughts/ feelings for birds/animals/ trees, etc. verbally	ECL2-5.14 Draws or writes a few words or short sentence in response to the environment (birds, plants, garden, etc.) poems and stories.	ECL2-6.14 Works in team for the display of the posters.
ECL2-1.145 Talks about friends, school, etc.	ECL2-2.15 Express their thoughts through drawings	ECL2-3.15 Draws pictures to communicate messages	ECL2-4.15 Makes a card for their friend, sending a short message.	ECL2-5.15 Composes and writes simple, short sentences with space between words to express themselves.	ECL2-6.15 writes useful messages for his/her school premises (classroom, garden, playground, etc.).

## Developmental Goal 3

Children become involved learners and connect with their immediate environment (IL)

KEY COMPETENCIES:

<p>Sensory Development</p> <ul style="list-style-type: none"> <li>• Sight, Sound, Touch, Smell, Taste</li> </ul>	<p>Cognitive Skills</p> <ul style="list-style-type: none"> <li>• Observation, Identification, Memory, Matching, Classification, Patterns, Sequential Thinking, Creative Thinking, Critical Thinking, Problem Solving, Reasoning, Curiosity, Experimentation, Exploration</li> </ul>	<p>Concepts related to environment</p> <ul style="list-style-type: none"> <li>• Natural-animals, fruits, vegetables, food</li> <li>• Physical — water, air, season, sun, moon, day and night</li> <li>• Social — myself, family, transport, festival, community helpers, etc.</li> </ul>
<p>Concept Formation</p> <ul style="list-style-type: none"> <li>• Colours, shapes, distance, measurement, size, length, weight, height, time</li> <li>• Spatial sense</li> <li>• One-to-one correspondence</li> </ul>	<ul style="list-style-type: none"> <li>• Number Sense</li> <li>• Count and tell how many</li> <li>• Numeral recognition</li> <li>• Sense of order (can count ahead of a number up to 10)</li> </ul>	<p>Number Operations</p> <ul style="list-style-type: none"> <li>• Addition</li> <li>• Subtraction</li> <li>• Multiplication</li> <li>• Division</li> </ul>
<p>Measurement</p> <ul style="list-style-type: none"> <li>• (Length, Mass, Volume, Temperature)</li> </ul>	<ul style="list-style-type: none"> <li>• Shapes (2 D Shapes, 3D shapes, Straight Line, Curved Line, Plain and Curved Surfaces)</li> </ul>	<ul style="list-style-type: none"> <li>• Data Handling</li> <li>• Pattern</li> <li>• Calendar Activity</li> <li>• Use of Technology</li> </ul>

PRESCHOOL 1	PRESCHOOL 2	PRESCHOOL 3 (BALVATIKA)	CLASS 1	CLASS 2	CLASS 3
<p>IL1.1</p> <p>Uses all senses to observe and explore the environment</p>	<p>IL2.1</p> <p>Uses five senses to observe and explore the environment</p>	<p>IL3.1</p> <p>Uses all senses to observe and explore the environment</p>	<p>IL4.1</p> <p>Notices and describes finer details of objects such as colours, sounds, their surface, animals, birds in the immediate surroundings</p>	<p>IL5.1</p> <p>Identifies simple observable features of objects, plants, animals in the immediate surroundings.</p>	<p>IL6.1</p> <p>Identifies simple observable features of leaves, trunks and bark of plants, animals, and birds in immediate surroundings.</p>
<p>IL1.2</p> <p>Identifies and names common objects, sounds, people, pictures, animals, birds, events, etc.</p>	<p>IL2.2</p> <p>Describes common objects, sounds, people, pictures, animals, birds, events, etc.</p>	<p>IL3.2</p> <p>Notices and describes finer details of common objects, sounds, people, pictures, animals, birds in the immediate environment.</p>	<p>IL4.2 a</p> <p>Identifies common objects, plants, animals, signs on the boards in the immediate neighbourhood</p>	<p>IL5.2 a</p> <p>Identifies objects, signs, places, common activities in the immediate neighbourhood</p>	<p>IL6.2 a</p> <p>Identifies objects, signs, places, activities at home/school/ neighbourhood.</p>

			IL4.2 b Identifies directions with the support of adults and makes sketches of places	IL5.2 b identifies, directions and locates home, schools in the pictures /sketches	IL6.2 b Identifies directions, location of objects/places in simple map (home/classroom/school) using signs/symbols verbally
IL 1.3 a Remembers and recalls 2–3 objects seen at a time	IL 2.3a Remembers and recalls 3–4 objects seen at a time	IL 3.3a Remembers and recalls 4–5 objects seen at a time	IL4.3a Remembers and recalls more than 5-6 objects seen at a time	IL5.3a Remembers and recalls more objects seen at a time and describes a few in his/her own words	IL 6.3 a Remembers and recalls more objects seen at different point of times and describes them
IL 1.3 b Identifies the missing part of a familiar picture	IL 2.3b Identifies 3–5 missing parts of a picture of familiar object	IL 3.3b Identifies 3–5 missing parts of a picture of familiar object	IL4.3b Identifies 4-6 missing parts of a picture of familiar object	IL 5.3b Compares given objects/pictures and identifies similarities and differences	IL 6.3b Compares given objects/pictures and describes similarities and differences
IL 1.4 Places 3–4 objects of two groups in one-to-one correspondence	IL 2.4 Places 4–5 objects of two groups in one-to-one correspondence	IL 3.4 Places 5-6 objects of two groups in one-to-one correspondence	LEADS TO DEVELOPMENT OF NUMBER SENSE (Progression will be seen in Number Sense in Mathematics)		
IL 1.5 Compares two objects based on one observable property, for example–length, weight, or size	IL 2.5 Compares and classifies objects by two factors like shape and color, size and shape , etc. Describes objects using size words like (big/small, tall/Short)	IL 3.5 Compares and classifies objects by three factors like shape, color and size , etc. Correctly uses position words (besides, inside, under) to describe objects	IL 4.5 Compares and classifies objects/ pictures based on multiple factors and demonstrates understanding of position	IL 5.5 Compares and classifies objects/ pictures based on multiple factors and describes them using properties	IL 6.5 Compares and classifies objects/ pictures in different categories and describes the properties used for classification
IL1.6 Seriates / arranges 2–3 objects/ picture cards in a sequence for example- shape, size, and occurrence of events.	IL 2.6 Seriates / arranges 3–4 objects/ picture cards in a sequence for example- shape, size, occurrence of events	IL 3.6 Seriates/arranges 4–5 picture cards/ objects in a sequence for example- shape, size, occurrence of events	IL 4.6 Seriates/ arranges more than 5 objects based on criteria	IL 5.6 Applies seriation in ordering numbers, measurement, etc.	IL 6.6 Applies seriation in ordering numbers, ascending -descending number, and number patterns
IL 1.7 Enjoys stories based on the occurrence of different events	IL 2.7 Narrates random events of his/her daily life in his own words	IL 3.7 When recited a story, can understand time related events what happened first, who came at night, etc.	IL 4.7 Describes his/her daily routine in sequence using words in the morning, afternoon, evening, and night.	IL 5.7 Sequences the events occurring according to their duration in terms of days; for example, does a child remain in school for a longer period than at home.	IL 6.7 Sequences the events occurring according to their duration in terms of days/ months and hours



IL 1.8a Solves simple day-to-day problems by themselves or with adult's support	IL 2.8 a Provides solutions to simple problems situations	IL 3.8 a Provides solutions to simple problem-solving situations with reasons	IL 4.8 a Provides solutions to simple problem-solving situations with reasons and solves the problem independently	IL 5.8 a Demonstrates problem solving skills in day-to-day simple situations	IL 6.8 a Shows problem solving skills in day-to-day situations and in group
IL 1.8 b Expresses curiosity about the immediate surroundings and asks related questions	IL 2.8 b Expresses curiosity about the immediate surroundings and asks questions (develops related concepts)	IL 3.8 b Engages in investigating and manipulating objects in the environment, asks questions, inquires, discovers, and constructs own ideas and predicts	IL 4.8 b Shows curiosity and interest in exploring environment, takes interest in experimentation and exploration, draws inferences and predicts	IL 5.8 b Shows curiosity and interest in experimentation and exploration and takes initiative in drawing inferences and reasoning	IL 6.8 b Shows curiosity and interest in experimentation and exploration, explains, and demonstrates scientific thinking
IL 1.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - watering plants)	IL 2.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - watering plants, not plucking flower, or do not hurt animals)	IL 3.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - Do not waste water, switching of light when not in use, etc.)	IL 4.8 c Demonstrates awareness and sensitivity towards environmental concerns (example – planting flower plants, watering them regularly, saving water by planting trees, etc.)	IL 5.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - not wasting food, throwing waste in bin, keeping water and food for birds and animals, etc.)	IL 6.8 c Demonstrates awareness and sensitivity towards environmental concerns like showing concern towards pollution of water and air, cutting of trees, hurting animals/birds, etc.
IL 1.9 Counts to three objects	IL 2.9 Counts and perceives objects up to five	IL 3.9 Counts to 10 objects	ILM 4.9 Counts objects up to 20, concretely and pictorially	ILM 5.9 Counts objects up to 100 in group of tens.	ILM 6.9 Counts objects to 1000 in group of tens and hundreds.
IL 1.10 Recites poems/stories based on number names up to 5	IL 2.10 Can count forward and backward from a particular number up to 5	IL 3.10 Can count forward and backward from a particular number up to 9	ILM 4.10 Can count forward and backward from a particular number up to 20	ILM 5.10 Can count forward and backward from a particular number up to 99	ILM 6.10 Can count forward and (backward) from a particular number (up to 999)
L 1.11 Recites poems using numbers of names up to 5 by hand movements showing Like fingers to show numbers	IL 2.11 Identifies numerals with corresponding numbers up to 5	IL 3.11 Identifies numerals with numbers and writes numerals up to 9	ILM 4.11 Identifies numerals with numbers and writes numerals up to 99	ILM 5.11 Reads and writes number names and numerals for numbers up to 999.	ILM 6.11 Reads and writes number names and numerals up to 9999 using place value

	IL 2.12 Develops a sense of presence/absence of objects (example one sweet was on a plate if eaten nothing is left)	IL 3.12 Demonstrates the awareness that things reduce in number and become nil (example 3 birds sitting on a branch of tree flew away one by one at the end no bird is left on the branch)	ILM 4.12 Develops the concept of zero.	ILM 5.12 Uses zero in place value system	ILM 6.12 Applies properties of zero in addition, subtraction, and multiplication of numbers
IL 1.13 Compares two numbers upto 3 and uses vocabulary like more and less	IL 2.13 Compares two numbers up to 5 and uses vocabulary like more than, less than	IL 3.13 Compares two numbers up to 10 and uses vocabulary like more than, less than	ILM 4.13 Compares two numbers up to 20 and uses vocabulary like bigger than or smaller than	ILM 5.13 Compares and forms the greatest and smallest two-digit numbers (with and without repetition of given digits).	ILM 6.13 Compares and forms the greatest and smallest three-digit numbers (with and without repetition of given digits)
	IL 2.14 Combines two groups up to 5 objects and recounts	IL 3.14 Combines two groups up to 9 objects and recounts	ILM 4.14 Construct's addition facts up to 18 by using concrete objects and applies them in daily life.	ILM 5.14 Develops their own strategies to add two numbers (sum not exceeding 99) and applies them to solve simple daily life problems/situations.	ILM 6.14 Appreciates the standard algorithm for addition of numbers where sum not exceeding 999 and applies it to solve simple daily life problems/situations.
Competence of addition of numbers starts developing after the age of 4 years i.e., Preschool 2 stage	IL 2.15 Takes out objects from a collection up to 5 objects and recounts	IL 3.15 Takes out objects from a collection up to 9 objects and recounts	ILM 4.15 Construct's subtraction facts up to 9 by using concrete objects and applies them in daily life.	ILM 5.15 Develops her/his own strategies to subtract two numbers upto 99 and applies them to solve simple daily life problems/situations.	ILM 6.15 Appreciates the standard algorithm for subtraction of numbers up to 999 and applies it to solve simple daily life problems/situations.
Competence of subtraction starts developing after the age of 4 years, i.e., Preschool 2 stage			ILM 4.16 Develops relationship between addition and subtraction of numbers	ILM 5.16 Appreciates and applies relationship between addition and subtraction of numbers	ILM 6.16 Applies the relationship between addition and subtraction in 3-digit numbers
Competence of relating addition and subtraction starts developing after the age of 6 years, i.e., Class 1			ILM 4.17 Develops strategies for repeatedly adding numbers up to 10, sum not exceeding 20	ILM 5.17 Develops the idea of multiplication of numbers and constructs and applies multiplication facts (tables) of 2, 3 and 4 in daily life situations	ILM 6.17 Constructs and applies the multiplication facts (tables) of 5 to 10 in daily life situations

Competence of multiplication starts developing after the age of 6 years, i.e., Class 1				ILM 5.18 Develops the idea of division of numbers as equal distribution/sharing.	ILM 6.18 Explains the meaning of division facts by equal grouping and finds it by repeated subtraction. For example, $12 \div 3$ can be explained as number of groups of 3 to make 12 and finds it as 4 by repeatedly subtracting 3 from 12
Competence of division starts developing after the age of 7 years, i.e., Class 2				ILM 5.19 Identifies appropriate operation (addition or subtraction) to solve problems in a familiar situation/context	ILM 6.19 Analyses and applies an appropriate operation (addition and subtraction) to solve problems in a situation/context
IL 1.20 Uses vocabulary related to money using poems and stories	IL 2.20 Identify Indian currency coins	IL 3.20 Identify Indian currency notes	ILM 4.20 Represents an amount up to Rs. 20 using notes/coins	ILM 5.20 Represents an amount up to Rs. 100 using notes and coins	ILM 6.20 Adds and subtracts small amounts (up to Rs. 500) with or without regrouping
IL 1.21 Uses vocabulary to express length through poems riddles, jokes, and stories	IL 2.21 Compares two objects in terms of their lengths as longer than/ shorter than, taller than/ shorter than	IL 3.21 Compares three objects in terms of their lengths as longest/shortest tallest/shortest	ILM 4.21 Estimates and measures short lengths using non uniform units like a finger, hand span, length of a forearm, footsteps, etc.	ILM 5.21 Estimates and measures length/ distances using uniform non-standard units like a rod/ pencil/ thread, etc.	ILM 6.21 Estimates and measures length and distance using standard units like centimeters or meters and identifies relationships
IL 1.22 Uses vocabulary to express weight through poems, and stories	IL 2.22 Uses vocabulary to express weight through poems, riddles, jokes, and stories	IL 3.22 Compares two objects in terms of their weight as heavier than/ lighter than	ILM 4.22 Compares three objects in terms of their weight as heaviest/lightest	ILM 5.22 Compares objects as heavier than/ lighter than using simple balance.	ILM 6.22 Weighs objects in her daily contexts using standard units– grams and kilograms using simple balance
IL 1.23 Uses vocabulary to express capacities through poems and stories	IL 2.23 Uses vocabulary to express capacities through poems riddles, jokes, and stories	IL 3.23 Compares capacities of two vessels like bottles, glasses, bucket, etc.	ILM 4.23 Estimates and measures capacities of containers using uniform non-standard units like a cup/ spoon / mug, etc.	ILM 5.23 Compares the capacity of different containers in terms of non-standard units for example cup/ spoon/ bucket, etc.	ILM 6.23 Estimates and measures capacities of containers in terms of liters like a bucket can be filled up by 15 bottles of 1litre.

Competence of measuring temperature starts developing after the age of 6 years i.e., Class 1			ILM 4.24 Appropriately uses vocabulary like hot or cold about objects/ weather, etc.	ILM 5.24 Compares objects as hotter than as / colder than by observable properties like condensation / steaming, etc.	ILM 6.24 Measures temperature using a thermometer
IL 1.25 Identifies, basic shapes like ball, shoe box, birthday cap, ice-cream cone, etc.	IL 2.25 Describes the physical features of various solids/ shapes in her/his own language. For example- a ball rolls and has no corners, a box slides and has corners, etc.	IL 3.25 Identifies the 2-D shapes by tracing the faces of 3-D shapes on a plane surface	ILM 4.25 Identifies and describes 3D shapes with their observable characteristics. For example- a shoe box is a cube and has 6 faces, 8 corners, a ball is sphere with no corner and no flat surface, a cap of a pen is a cylinder with a round surface.	ILM 5.25 Identifies and describes basic 2D shapes such as rectangle, triangle, circle, and other shapes around her/him. For example, the pages of a book are rectangular and has 4 sides, 4 corners, trace of a bangle has no corner.	ILM 6.25 Draws/ represents straight lines in various orientations (vertical, horizontal, slant) by using a straight edge or by free hand.
Skill of using fractions starts developing after the age of 5 years i.e., Preschool 3 stage		IL 3.26 Uses vocabulary like half roti / half glass of water, etc. in daily context	ILM 4.26 Identifies the relationship between half and whole using paper folding, daily life context like folding of roti/ sandwich, etc. and clothes (bedsheets, handkerchief, etc.).	ILM 5.26 Identifies the relationship between half, quarter and whole using paper folding, daily life context like folding of roti/ sandwich, etc. and clothes (bedsheets, handkerchief, etc).	ILM 6.26 Identifies half, one-fourth, three-fourths of a whole in each picture by paper folding and in a collection of objects.
IL 1.27 Follows/ reproduces a simple pattern like clapping hands, clicking fingers, tapping feet, etc.	IL 2.27 Identifies the unit of repeating a simple pattern and extends the pattern	IL 3.27 Creates new patterns with leaf printing or thumb printing, etc.	ILM 4.27 Observes, extends, and creates patterns of shapes, numbers, and musical/sound patterns. For example, arrangement of shapes/ objects/ numbers, etc.: - For example 1, 2, 3, 4, 5, . . . 1, 3, 5, . . . 2, 4, 6, . . . 1, 2, 3, 1, 2, etc.	ILM 5.27 Observes and generalises the patterns in numbers like in multiplication tables, 1-100 number grid or objects in the environment.	ILM 6.27 Observes, extends, and generalizes patterns in numbers up to three digits like patterns of numbers in multiplication tables, number chart up to 1000 or objects in the environment.

IL 1.28 Identifies / counts objects around like her/ his own body parts and draw inferences like two hands, 1 nose etc through poems	IL 2.28 Collects objects from her/ his surroundings based on simple instructions for example: bring 2 spoons etc	IL 3.28 Draws inferences from situations that surround him/her for example: I have more red pencils than blue.	ILM 4.28 Collects, records (using pictures/ numerals) and interprets simple information by looking at visuals. (For example, in a picture of a garden the child looks at different flowers and draws inference that flowers of a certain colour are more).	ILM 5.28 Draws inference based on the data collected such as the number of vehicles used in Samir's house is more than that of Angelina's, the price of a commodity is more than any other commodity in a rate chart, etc.	ILM 6.28 Records data using tally marks, represents pictorially, and draws conclusions
IL 1.29 Uses vocabulary in daily life like today, tomorrow and yesterday	IL 2.29 Identifies special days like Saturday, Sunday, holiday, etc. For example: Sunday is a holiday.	IL 3.29 Recites the names of the days of the week and months of the year	ILM 4.29 Identifies the names of the days of the week and months of the year for day/ month	ILM 5.29 Identifies the days of the week and months of the year using a calendar in her daily life events.	ILM 6.29 Identifies a particular date and corresponding day on a calendar
IL 1.30 Explores different technological tools like TV, Remotes, mobile phones, and others available in house	IL 2.30 Demonstrates awareness about technology like T.V., mobile phones.	IL 3.30 Describes usage of commonly available technological tools around him/ her.	ILM 4.30 Uses some of the technological tools available around him/her.	ILM 5.30 Demonstrates interest/ curiosity in newer technology as per child's context.	ILM 6.30 Applies the knowledge of various technological tools in daily life.
EVS AS A SEPARATE SUBJECT STARTS IN CLASS THREE.EVS IN INTGRATED IN LANGUAGES AND MATHS IN CLASSES 1 AND 2					EVS 6.1 Identifies simple observable features (e.g., shape, colour, texture, aroma) of leaves, trunk, and bark of plants, animals and birds in immediate surroundings EVS 6.2 Identifies simple features (e.g. movement, at places found/ kept, eating habits, sounds of animals and birds) in the immediate surroundings EVS 6.3 Identify relationships with and among family members.

				<p><b>EVS 6.4</b> Identifies objects, signs (vessels, stoves, transport, means of communication, transport, signboards , etc.), places (types of houses/shelters, bus stand, petrol pump , etc.) activities (works people do, cooking processes, , etc.) at home/school/ neighbour hood</p> <p><b>EVS 6.5</b> Describes need of food for people of different age groups, animal/ birds, availability of food and water and use of water at home and surroundings</p> <p><b>EVS 6.6</b> Describes roles of family members, family influences (traits/features/habits/ practices), need for living together, through oral, written or other ways</p> <p><b>EVS 6.7</b> Groups objects, birds, animals, features, activities according to differences/ similarities using different senses (e.g., appearance/ place of living/ food/ movement/ likes- dislikes/ any other features) using different senses</p> <p><b>EVS 6.8</b> Differentiates between objects and activities of present and (at time of the elders) (e.g., clothes/ vessels/ games played/ work done by people)</p> <p><b>EVS 6.9</b> Identifies directions, location of objects/places in simple maps of (home/classroom/school) using signs/symbols verbally</p>
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				<p><b>EVS 6.10</b>          Guesses properties, estimates quantities of materials/ activities in daily life and verifies using symbols/ non standard units (hand spans, spoons/mugs, etc.)</p> <p><b>EVS 6.11</b>          Records observations, experiences, information on objects/activities/ places visited in different ways and predicts patterns (e.g. shapes of moon, seasons)</p> <p><b>EVS 6.12</b>          Creates drawings, designs, motifs, models, top, front, side views of objects, simple maps (of classroom, sections of home/ school, etc.) and slogans, poems, etc.</p> <p><b>EVS 6.13</b>          Observes rules in games (local, indoor, outdoor) and other collective tasks</p> <p><b>EVS 6.14</b>          Voices opinion on good/bad touch. stereotypes for tasks/ play/ food in family w.r.t. gender, misuse/wastage of food and water in family or food</p> <p><b>EVS 6.15</b>          Shows sensitivity for plants, animals, the elderly, differently abled and diverse family set ups in surroundings. (For the diversity in appearance, abilities, choices - likes/dislikes, and access to basic needs such as food, shelter, etc.)</p>
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## **9. Introduction to Vidya Parvesh/SPM**

School readiness is the foundation for ensuring quality and equity in access to education as well as improving the learning outcomes. A simple definition for school readiness could be that a child who is ready for school has the basic minimum skills and knowledge in a variety of domains that will enable him/her to be successful in school. The National Early Childhood Care and Education (ECCE) Curriculum Framework, developed by the Ministry of Women and Child Development (MWCD), elucidated that “children, schools and families are considered ready when they have gained the competencies and skills required to interface with the other dimensions and support smooth transition of children from home to Early Childhood Care and Education (ECCE) centre and subsequently to primary school”.

In this connection, ‘Vidya Pravesh— Three-month Play-based School Preparation Module’ for Grade-I has been developed [by NCERT] as per the recommendations of the National Education Policy (NEP 2020). The intent is to ensure that all children are exposed to a warm and welcoming environment when they enter Grade-I, especially during the Covid-19 pandemic, leading to their smooth transition to school. The module consists of exemplified activities and worksheets to be introduced in the initial three months or 12 weeks of Grade-I. The activities are designed to help children develop different competencies like helping, sharing, getting along with other children, following a school routine, learning to adjust to a new environment and concentrating on an activity for a period of time to increase their attention span. Through these activities, children will also learn foundational literacy and numeracy concepts and develop skills that have proven to be effective in building a sound foundation for learning in the early primary grades. With an understanding that each child is unique, and carries infinite capacities, the module is designed to empower the teacher to create a stimulating learning environment for children that is joyful, full of opportunities, safe, ensures emotional security and provides support to all the children in school, and at home. The play-based pedagogy is a significant aspect of the module that plays a vital role in providing stimulating learning opportunities for the children, creating a joyful and stress-free environment, and addressing the learning needs of the children with special needs or disabilities. Swami Vivekanand said, “Education is the manifestation of perfection already existing in man”. The focus of this module is on the holistic development of the children, nurturing Sanskar, values, love, freedom of expression, spontaneity, and a feeling of togetherness amongst children. It also provides opportunities for experimentation, exploration, investigation, problem-solving, critical thinking, rational thought, imagination, enriching interaction with others, learning cultural diversity, and ethical values. Age and developmentally appropriate Yoga (Yogasana), breathing exercises (Pranayama), music, dance, physical exercises, the celebration of festivals, art



exposure, excursion tours, and play activities must be a regular feature of the school preparation to be able to gain physical fitness, mental alertness, memory—enhancement and emotional balance. The confidence, motivation, and vigour to learn, developed during this process—prepare the children for a smooth and successful start at the foundational stage. It helps in reducing the number of dropouts in the preparatory classes in schools and helps children build a strong foundation for further learning and development. Understanding the importance of kindness and a sense of responsibility would help them become good citizens in the future. The pedagogical processes employed are not limited to the initial three months or 12 weeks only, but they are expected to be continued throughout the foundational stage of learning. Thus, the focus of this module is on building an interface between children, schools, and the family to work together to ensure a smooth transition of the children from home to school, or from pre-school to primary school. According to Brahnavalli (Taittreya Samhita), the five-fold development of human beings is to attain all-round refinement of human personality, known as Panchkosh; namely Annamay Kosh (Physical Development); Pranmay Kosh (Vital Development); Manomay Kosh (Mental Development); Vigyanmay Kosh (Cognitive Development); and Anandmay Kosh (Spiritual Development), all of which have to start from the earliest stages of development and learning.

This School Preparation Module (SPM) is essentially around 12 weeks of developmentally appropriate instruction at the beginning of Class I designed to bolster a child’s pre-literacy, pre-numeracy, cognitive and social skills. This module consists of activities and workbooks around the learning of alphabets, sounds, words, colours, shapes, and numbers, and involving collaborations with peers and parents. The JKUT has already adopted it. As envisioned in NEP 2020, States/UTs will also prioritise that prior to the age of 5 every child will move to a “Preparatory Class” or “Balvatika” (that is, before Class 1). The learning in this Preparatory Class shall be based primarily on play-based learning with a focus on developing cognitive, affective, and psychomotor abilities and early literacy and numeracy.

## **Rationale**

The context for this module is that a large proportion of children currently in elementary schools are undergoing ‘learning crisis’ as they have not been able to attain foundational literacy and numeracy, i.e. the ability to read and comprehend basic text and carry out basic addition and subtraction (NEP 2020). A possible reason for this crisis, as indicated by research, is that a large number of children are admitted in the school at the age of 5 or 6 years with limited language and cognitive skills and conceptual foundation, which are needed as a prerequisite for them to be able to successfully acquire competencies related to the basic literacy and numeracy at the early primary

stage in schools. As a result, children enter Grade-I with inadequate conceptual and linguistic preparedness for the primary school curriculum. Considering the existing context, the policy calls for immediate measures to be taken in ‘mission mode’ to ensure that the children have basic curricular preparedness in Grade-I. Accordingly, the NCERT has developed the Vidya Pravesh module, which is based on the Vidya Pravesh guidelines. Vidya Pravesh is an integral part of the foundational stage. Thus, NIPUN Bharat—A National Mission on Foundational Literacy and Numeracy (FLN Mission) of the Government of India is well-aligned to the key competencies and the learning outcomes (Annexure I) of Pre-school 3 (Balvatika).

The Vidya Pravesh module is developed to achieve the following objectives:

- To promote school preparedness in all children coming to Grade-I from diverse backgrounds.
- To ensure a smooth transition of children to Grade I.
- To provide play-based, age and developmentally-appropriate learning experiences in a joyful and stimulating environment leading to holistic development.
- To prepare children with the cognitive and linguistic competencies, which are pre-requisite for learning to read, write and develop number sense through a play-based approach.

For Vidya Pravesh module and Vidya Pravesh Guidelines, kindly click on the below-given links:

1. The ‘Vidya Pravesh Module’ can be accessed using the following link:

<https://ncert.nic.in/pdf/vidyapravesh.pdf>

2. The ‘Vidya Pravesh Guidelines’ can be accessed using the following link:

[https://ncert.nic.in/pdf/VidyaPravesh\\_Guidelines\\_GradeI.pdf](https://ncert.nic.in/pdf/VidyaPravesh_Guidelines_GradeI.pdf)

**Key Takeaways:**

- **Children are the most capable learners on earth.**
- **Children’s learning in the early years sets the stage for lifelong learning.**

## 10. UNDERSTANDING FOUNDATIONAL LANGUAGE AND LITERACY

### **This chapter discusses the:**

- Need of Foundational Learning Skills: Reading with Comprehension, Writing & Numeracy.
- Multilingual Classrooms & Multilingualism in Classroom
- Approaches of Teaching Language and Literacy: Phonics, Keyword, Whole Language & Balanced Approach
- Recent shifts in Perspectives in Early years Literacy Education
- Key components in Foundational Language and Literacy: Oral Language Development, Reading Comprehension, Concept about Print, Writing, Vocabulary, Phonological Awareness, Reading Fluency, etc.

### **Need of Foundational Learning Skills**

#### ***(Reading with Comprehension, Writing and Numeracy)***

a. *Developing a strong foundation of language, literacy, and mathematical skills in the early years (Age group 3 to 9) is critical to all future learning:*

The ability to read and write, and to perform basic operations with numbers, is a necessary foundation and indispensable prerequisite for all future schooling and lifelong learning. Early literacy and numeracy skills are not only foundational for learning but are correlated with greater quality of life and personal well-being and are critical for educational outcomes in later years. A robust foundation in literacy and numeracy helps children to learn, experiment, reason and create, to be active and later become informed citizens, and contribute socially, culturally, and economically. Literacy is no longer perceived as a simple cognitive skill but as a complex and active process with cognitive, social, linguistic, and psychological aspects (Teale & Sulzby, 1989). Children's concepts about literacy are formed from their earliest experiences and interactions with readers and writers. The process also involves their own attempts to read, write, and develop their own meaning and purpose of literacy skills. The idea is to focus on building the skills in early childhood education itself.

b. *This understanding of early literacy development complements the current research supporting the critical role of early experiences in shaping brain development:*

Surveys conducted by NCERT and other agencies show that the number of children who cannot read is extremely high despite completing primary school. The studies are constantly drawing our attention to the grim reality of reading in early classes.

c. *Mathura pilot project:*

Achieving early literacy skills following the philosophy of emergent literacy was the objective of Mathura pilot project initiated by NCERT in 2007. It was implemented in 561 schools of 5 blocks of Mathura. Findings of the project showed that after the implementation of emergent literacy/framework, children could read with comprehension and made attempts to write on their own.

d. *The 'India Early Childhood Education Impact Study, (2017)' conducted by Centre for Early Childhood Education and Development (CECED) at Ambedkar University, UNICEF and ASER:*

This report mentioned that 'High quality Early Childhood Education programmes help the children to develop a conceptual and language foundation for later learning of reading, writing and mathematics'. Early childhood (birth to 9 years) is a critical period of development and early literacy and early numeracy are two important skill areas that develop along with social, emotional, cognitive, and physical development of the child during this period. Literacy and numeracy development is intricately linked with participation of children in everyday communications, actions, thoughts and self-expression in speech and initial forms of writing. Communication and bonding with family, and friends play an important role in developing early literacy skills. Resources and materials such as children's literature, stationery, art, and craft materials, counting objects enhances children's interest in reading, writing and numeracy. Relevant literacy experiences give them opportunities for self-expression in oral and written forms, reading with comprehension, pleasure, and critical perspective. It also develops good communication skills and personal social qualities. Their awareness of materials, shape, space, pattern, and difference, classifying, matching, comparing, and ordering are important for the development of numeracy. The knowledge, skills, attitudes, and dispositions developed in these early years impact significantly upon their later learning experiences. It is evident that the skills related to literacy and numeracy develops in integration with each other as per the child's experiences in daily life. In the initial years of learning, the skills of literacy and numeracy are learnt without making conscious distinction between languages and numbers e.g., the numeracy skills can be naturally learnt from their experiences of reading and writing, stories, poems, riddles etc.

e. *NEP 2020:*

The NEP 2020 firmly recognises the importance of quality Early Childhood Care and Education (ECCE) and clearly stressed upon that.

Over 85% of a child's cumulative brain development occurs prior to the age of 6, indicating the critical importance of appropriate care and stimulation of the brain in the early years in order to ensure healthy brain development and growth.  
- NEP 2020, Para1.1

Therefore, it is imperative to have a quality ECCE programme in place to attain optimal outcomes in the domains of physical and motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.

The National Policy on Education (2020) has focused on pre-school education and made it integral part of the education system. The needs and demands of child will be at the centre while formulation of curriculum for foundational literacy at early grades. The physical, motor, psychological, social, emotional, intellectual development of children of varied ages should be considered while developing content for the children of early grades for the attainment of foundational literacy.

f. *The foundational literacy skills are nurtured in the school:*

Much depends upon the understanding and attitude of the teachers towards the language the young learners bring to the school. It is to be acknowledged that when children enter school, they have good control over at least one spoken language, are aware of environmental print and have experimented with written forms of communication through scribbling on walls, mud, paper, books, etc. These experiences of children reflect the fact that reading and writing develop at the same time among children and are inter-related. The goal in all reading situations should be 'to understand'. It is imperative that the message that is conveyed in the printed text be understood. Literacy is not viewed merely as decoding but rather the whole act of reading, including comprehension. (Mason and Sinha, 1993).

### **Multilingual Classrooms**

a) *Children bring their home language in the classroom, and their learning process should accommodate their languages as a resource and not as interference:*

Language reflects society. The values inherited in a society can be inferred from its language. Multilingual education can play a significant role in engaging diverse learners and ensuring academic success. In a typical Indian classroom, there will be children speaking more than one language. Further,

there will be children who speak region specific language as their mother tongue. The foundational literacy skills can be developed on the linguistic and cultural resources of children. The natural ways of learning language are based on the fundamental idea that mother tongue is the best medium of comprehending, and learning. It has been observed that the learning achievements of the children suffer if they are not given support in using their own language for literacy learning. This happens very commonly when the focus remains on teaching learning of dominant language. This situation leads to the accumulation of load of incomprehension among children. The focus of foundational literacy practices should be on promoting multilingualism for learning in the classroom. Further, if the child has exposure to more than one language, the child becomes academically more creative and socially more tolerant. This also facilitates the development of divergent thinking among children. The wide range of linguistic efficiencies and skills that they gain through this helps them in negotiating in different social situations more efficiently.

### **Multilingualism in Classroom**

- a. Possible Situation 1: Child's language is different from the school language, and textbooks.
- b. Possible situation 2: Child's language and language of the school is common, but other children speak different languages.
- c. Possible Situation 3: Child's home language is combination of two or more languages, and language of the school is different.
- d. Possible Situation 4: In multilingual families there can be a home language spoken by other family members who may sometimes be different from mother-tongue or local language. (NEP, 2020)
- e. There could be more such situations in early years of education. To build a strong foundation of Literacy and Numeracy in the foundational years, it is crucial that the States/UTs map the children's spoken languages with that of the teachers' and provide for teachers who can negotiate the classroom transactions as per comfort of the children in their own spoken languages.

### **Defining Education in the Early Years**

The National ECCE Curriculum Framework, 2013 conforms to the vision of holistic and integrated development of the child, with focus on care and early learning at each sub-stage of the developmental continuum, to support children's all round and holistic development. It also mentions that the pre-school curriculum must address the following interrelated domains of holistic development through an integrated and play-based approach:

- a. *Sensory and Perceptual Development:* Development of the five senses through visual, auditory, and kinaesthetic experiences.

- b. *Physical, Health and Motor Development:* Gross motor skills, fine motor skills, coordination of fine muscles with dexterity; eye-hand coordination; sense of balance, physical coordination, and awareness of space and direction; nutrition, health status and practices.
- c. *Language Development:* There is no linear progression of language skills, but the skills develop holistically. Children do not learn how to read first and then learn how to write. Language classroom experiences of teachers have shown that the processes of reading, writing, listening, viewing, and thinking develop simultaneously as learners become literate. In schools, these research findings and rich experiences of children should be built upon in the learning process. Emergent literacy perspective advocates literacy learning by interacting with meaningful texts for genuine purposes including enjoyment.
- d. *Cognitive Development:* Development of various concepts, including pre-number and number concepts and operations, (knowledge and skills related to comparing, classification, seriation, conservation of space and quantity, one-to-one correspondence, counting); spatial sense, patterns and estimations in measurement; data handling; skills related to sequential thinking, critical thinking, observing, reasoning and problem solving; and knowledge of concepts related to the physical, social and natural environment.
- e. *Development of Creative and Aesthetic Appreciation:* Exploring different art forms, developing dispositions, expression, and appreciation for artistic, dance / drama and musical activities.
- f. *Personal, Social and Emotional Development:* Development of self-concept; self-control; life skills / self-help skills; habit formation; initiative and curiosity; engagement and persistence; cooperation; compassion; social relationships; group interaction; pro-social behaviour; expressing feelings, accepting others' feelings.

The 'Pre-School Curriculum' NCERT (2019) emphasises on three developmental goals that comprises of all the five domains rather than talking about each domain in isolation. One of the objectives of preschool is to help children become involved learners, think critically, be creative, collaborate, communicate, and connect with their immediate environment which are well aligned with the early literacy and numeracy skills. The overall development of the personality of a child through play, manipulation of concrete material for discovery, experimentation, and exploration is the purpose of preschool education. It emphasises on a print rich environment that allows young children to practice foundational literacy skills in their daily life, combined with age and developmentally appropriate pedagogical practices of key concepts and literacy skills. This lays the foundation of literacy learning

in the preschool. It also suggests about how to plan the pedagogical practices in such a way that goes along with the developmental stages of young children in the age group of three to six years.

### **Language Acquisition**

a. The language acquisition journey for the child begins in the womb and continues throughout the child's school years. Even before birth, infants experience and process sensory stimuli that promote neurological development in the brain.

b. It is understood that by the age of 5, children grasp the sound system, grammar and communicative competence of their home language(s) and acquire a sizable vocabulary. They learn to talk which is one of the most observable and significant achievements of their growing up years. For children, getting hold of newer language tools with the passage of time means new opportunities for social communication, for sharing lived experience, pleasures and needs and for making better sense of the world around them.

c. It is worth mentioning that phonemic awareness and enriched vocabulary skills acquired during early years are one of the key predictors of effective language competence. It can be used as an effective resource for classroom teaching and learning by activating their previous knowledge and giving space to their lived experiences such as discussing a theme like seasons through songs or folk songs. The focus during acquisition is not the form or structure of the language's utterances, but purposeful and meaningful interaction through the act of communication itself.

### **Approaches to Teaching Language and Literacy**

a. *Reading Readiness Model:*

Over the years, there have been much research on how and when a child learns to read and write. In the early 1950s, some theorists focused on maturation levels of children and believed that reading instruction should not be taught until children reached an age of mental readiness. The dominant theory was that reading readiness was the result of biological maturation. They believed that for formal reading instructions are necessary. In this reading readiness model, there are two ways in which theorists saw how children became prepared for instructions.

i. In Maturation view, researchers instructed families and teachers to not interfere with their child's natural development and advised postponing the teaching of reading until children were in kindergarten or first grade (6 years and six month of age). Arthur Gesell, a developmental psychologist advocated that instructions should be postponed until child naturally possesses some prerequisite skills.

ii. On the other hand, in Experience view researchers believe that rather than waiting for children to be ready they need to experience pre-requisite



skills to accelerate readiness. Instructions for pre-requisite skills can be seen as auditory discrimination, visual discrimination, visual motor skills and large motor skills. These skills were directly taught to young children to prepare them for formal reading instruction referred to as “reading readiness”. The reading-readiness model implies that children need to acquire these four skills to prepare for literacy. These skills are taught systematically to all children with little concern for experiences and information that children might already have.

We no longer accept the reading readiness model of literacy learning and development because it does not take into consideration some of the key aspects of engagement with oral language and print that promotes literacy acquisition.

b. *Emergent Literacy:*

By the 1980s, researchers challenged the perspective of readiness and believed in early literacy development. Researchers began to consider the importance of learning environment in which children interact and develop reading skills. The term emergent literacy proposes that literacy begins at birth in literate societies and continues till the child becomes conventionally literate (by grade 1 or 2). This view supports the notion that children in literate societies come to early childhood settings with rich yet diverse background of language experiences including recognizing written symbols and variety of conventional writing efforts from their homes. In addition to the linguistic development, child also gets inputs for development of numeracy skills such as handling numbers, thinking critically and creatively and develop spatial understanding. This stage of emergent literacy lasts till children begin to conventionally read and write.

- I. Emergent reading skills include awareness about print and pretend reading, including practices like ‘look and say’, i.e., reading words as pictures.
- II. Emergent writing skills include drawing and scribbling to represent something and express themselves in a form of writing.

There are many approaches, which were used to instil foundational skills in the students such as, phonics approach, keyword approach, whole language, however, all these approaches have their own limitations. Therefore, there is a shift in approach in recent times and balanced approach is favoured to get best results.

**Balanced Approach**

In the recent years, there has been an attempt to blend multiple approaches for literacy teaching in the initial years. This has been described as a balanced approach. This model acknowledges the importance of the function (comprehension, purpose, meaning) along with the form (phonemic awareness) of the literacy processes focussing on that learning happens best in teaching language holistically. The balanced approach is where teachers follow what is appropriate for their classroom and where every

child learns in a joyful and stress-free manner, by taking the best of multiple approaches.

For example, being literate requires much broader language skills than simply reading and writing and therefore children should be given plenty of opportunities to make meaning from texts, ask questions and read between the lines in many ways. In a balanced literacy approach, teachers encourage their children to see reading and writing modelled as s/he reads/writes in front of them, children share and get paired in the reading activities and write with the teacher, children get scaffolded in their literacy learning and gradually start practicing reading and writing independently. This broadens the scope of giving autonomy, flexibility, opportunity for planning the literacy process as per the need of young children. It also acknowledges the diversity in language and socio-cultural perspectives. Teachers should be aware of reading instruction like Read aloud, Shared Reading, Guided Reading, Independent Reading, Modelled and shared Writing, Guided Writing, and Independent Writing for enhancing literacy skills. This is characterized by meaningful literacy activities that provide children with both the motivation and skills to become proficient and lifelong literacy learners. The Balanced Literacy approach advocates balancing what is taught, how it is taught and with what it is taught (Fitzgerald, 1999).

#### **Recent Shifts in Perspectives in Early Years Literacy Education**

Major shifts that have occurred in the understanding of how children should be enabled to attain literacy are:

- a.** Learning to read and write may be a necessary but not a sufficient aim of literacy education. A more central aim should be to enable students to use language skills to participate meaningfully and in an empowered manner in society. Oral language and literacy development activities must therefore be planned concurrently for children as opposed to sequential approach, to help children not only learn to read but also make meaning of reading and read with comprehension.
- b.** New methods may be adopted for introducing them to the basics of language and literacy which are informed by the more recent research and understanding of emergent and early literacy which are sensitive to children's learning needs and contexts along with the early learning continuum from preschool to the primary stage. This understanding is based on the adoption of judicious and balanced approach to teaching reading and writing to young children instead of adopting either a purely whole language approach or phonics-based approach.
- c.** Oral language development must be linked to learning of literacy and must be developed concurrently in children along with literacy skills.
- d.** There should be an understanding and acknowledgement of the fact that both free drawing and independent writing are forms of expression related to literacy.
- e.** It is critical that teacher's own beliefs and knowledge related to early language and literacy need to be addressed to enable them to see meaning making as central to learning to read and write.
- f.** Explicit modelling of literacy practices should follow a "gradual release of responsibility model" which incorporates a range of reading/writing activities for helping children develop literacy skills, such as Read aloud/Modelled writing, Shared reading/writing, Guided Reading and thus graduating to Independent Reading/Writing.
- g.** Language and early literacy education should lead to not only development of these skills and competencies but also to the development of critical thinking and reasoning.

## Early Language and Literacy

Language is more than just listening, speaking, reading, and writing. Language serves the purpose of communication, thinking and making sense of the world through the processes of inferring and reasoning.

### a. *Understanding Reading and Writing*

(i) Children begin to read the written material around them, like on wrappers of biscuits and toffees, posters on the roadside, etc. As soon as children start holding pen, pencil, chalk, they start scribbling and try to add some meaning or message to them - this is also a part of the beginning of writing. These are the signs of their early literacy and natural efforts of shaping meaning and not the results of any formal education. In fact, the cognition of reading and writing also develops like development of oral language in the day-to-day meaningful and workable contexts.

(ii) The goal in all reading situations should be 'to understand'. It is imperative that the message that is conveyed in the printed text be understood. Emergent literacy perspective advocates literacy learning by interacting with meaningful texts for genuine purposes including enjoyment. This perspective focuses on all aspects of language (semantic, syntactic and grapho-phonetic), and not merely on phonics (Sinha, 2000).

(iii) Reading motivates students to read books independently, develop creativity, critical thinking, vocabulary, and the ability to express both verbally and in writing. It helps children relate to their surroundings and real-life situations. Thus, there is a need to create an enabling environment in which children read for pleasure and develop their skills through a process that is enjoyable and sustainable, and which remains with them for life.

***Children who read often become better learners, which lead to success in school and other areas of life.***

(iv) Writing is also a process of comprehending the thoughts and sharing it with others. It not only includes the process of joining words together rather it is a systematic procedure of sharing the knowing, information and ideas in a coherent manner. Writing enables children to explore, shape and clarify their thoughts, and to communicate them to others. By using effective writing strategies, children discover and refine ideas and compose and revise with increasing confidence and skill. Emergent literacy perspective emphasizes on similarities between oral and written language acquisition. Children's comprehension of their written language mostly depends on their effective use and understanding of oral language. Even before starting their formal instructional training for writing, children begin to interact with

the literacy environment around them and start building connections between symbols and their meanings.

b. *Concept of Writing in the Classroom*

The learners who come to school are already proficient in the knowledge of conversational language and some important concepts of reading and writing. If the process of teaching is gradually developed by making this proficiency an important base, then learning to read and write will become an interesting and meaningful experience for children.

The zig-zag lines of children's pictures convey a lot. The opportunity to draw motivates them to express their thoughts and experiences. In this phase of writing, teacher can facilitate in giving meaning to their drawings by writing for them in conventional manner. Writing/print is used to say something meaningful; such acts clarify this concept of literacy. This concept deepens with the increasing opportunities of reading and writing. Along with it, the technical aspects of writing also emerge like the direction of writing from left to right (in Hindi), from right to left (in Urdu), the shape of symbols, the space between two words. The understanding of these concepts slowly becomes visible in the effort of independent writing by children; in this phase the teacher should focus on formative assessment and explore the relationship between the reading and writing needs of the children.

c. *The process of developing skills in writing during the early foundational learning period are as follows:*

(i) Emergent Writing- drawing and scribbling: Children to be given time to draw during a language class and asked to talk about their drawing. Children's drawings slowly change to representational drawing when they start drawing from the environment like people, characters and start telling stories about it. Children also start including random letters (invented spellings) in their writing. As children gain more experiences in language, they notice that words are made up of more than one sound, each word is a group of conventional letters.

(ii) Conventional Writing: As children progress in their writing, they start using formal rules of grammar, punctuation, and spelling. Overtime invented spellings are replaced by appropriate spellings.

(iii) Writing Composition: It is observed that teaching of writing must be focused less on techniques and more and more with fundamental insights about how children process information for writing. Writing is a complex cognitive process, and it is important to understand the role and participation of the child as a writer in this process and writing as a thought process. Children share experiences or narrate/describe an incident making use of their understanding of conventional writing.

(iv) Reading and writing association is necessary to understand the interdependence of reading and writing. Both processes are complementary to each other. Skills and concepts learnt during reading are used in writing, and those of writing, in reading. Therefore, the written messages of children should be read by them, and written assignments should be based on material read by them. In this way, the understanding of read material will help the children in the expression of their personal experiences. This process will motivate learners to use writing in meaningful contexts.

### **Language Learning- An Everyday Process**

The children engage with language in their every day without realizing it. In one form or another they make use of language and their knowledge about the language too. They know how to address their elders, teachers. They are listening to conversations, may be radio too, watching television- these are the sources from which they draw their language and use it for communication. There is a lot of written and printed material available at our homes, the house number plate; folk art on the walls of the house; calendar; company's name on the gas stove, name of the family head engraved on the utensils; name tattoos on the arms; page of newspaper; shopping lists; toothpaste box etc.

What is important is the amount of attention paid to that writing or printed material. Children develop an understanding of reading and writing even before coming to the school. This pre-knowledge of the children can be considered as the foundation of developing their literacy skills.

### **Key Components in Foundational Language and Literacy:**

Development of early language and literacy in the formative years requires developing a wide range of skills, knowledge, and attitudes. This also requires developing literacy to build comprehension, writing for self-expression, vocabulary enrichment, experiences of reading with pleasure, engaging in interesting conversation. Rich early language and literacy experiences also gives opportunity for getting familiar with the aspects of language such as fluency, word recognition, letter knowledge and phonological awareness.

#### *Oral Language Development*

Includes improved listening comprehension, oral vocabulary, and extended conversation skills. Children come to school with a rich repertoire of oral language of their homes. However, some children's home and school languages are quite different, and they need to acquire a new language at school. Even children who speak the same language at home and school need

to continue to grow in their understanding and use of their mother tongue. The experiences in oral language are important for developing skills of reading and writing.

### *Reading Comprehension \**

Involves constructing meaning from a text and thinking critically about it. When a child can comprehend, she/he is able to explain, extend, give examples, make inferences, predict, and summarise what she has read. Thus, this domain covers the competencies of understanding texts and retrieving information from them, as well as interpreting texts.

*\* Reading essentially is a process of meaning making and comprehension is an integral part of reading. There are multiple factors which makes reading a meaningful activity instead of just pronouncing some words. Some of these factors are as follows-*

- Prediction- While reading the reader predicts about the next word or next sentence.*
- Comprehension- The reader tries to comprehend the content of the picture and the text.*
- Self-Correction- Reader tries to re-read the content and sometimes correct his/her own pronunciation.*
- Meaning Making- The reader tries to develop the meaning of the content that he or she is reading.*
- Joy- Reading needs to be a joyful process.*

*The reading strategies are motivated by the facts that written words have pronunciation, written words are part of sentence and a sentence has meaning; words are composed of parts, including letters and morphemes; the ultimate goal of reading is to extract meaning from text. Comprehension is an integral part of oral reading fluency. In a literacy rich environment the children are motivated to read with comprehension.*

### *Concept about Print*

Before children start their formal instruction in literacy their understanding about print is essential, as print conveys meaning and has its own purposes and features (ranging from direction of writing to turning of pages, reading of

book cover, about the author, and text). 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. This process progresses towards conventional writing along with the presentation of thoughts or information in a logical and organized manner. Learning to write is a developmental process, starting with children scribbling and drawing in the preschool years. This domain includes the competencies of writing letters and words as well as writing for expression.

### *Vocabulary*

Developing knowledge of a wide range of words and word meanings. This is not just about learning word definitions. If vocabulary is developed in contexts, children learn to use words in appropriate contexts. This domain includes the competencies of oral vocabulary, reading/writing vocabulary, and morphological analysis of words.

### *Phonological Awareness*

Involves building an understanding of the sound structure of a language. The ability to notice, think about, and words with the sounds in spoken language that can be ultimately linked to the symbol system of the language. 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*

Involves deciphering written words based on understanding the relationship between symbols and their sounds. This domain includes competencies of print awareness, letter knowledge and decoding, and word recognition. The aspect of decoding the text is important but it should emerge from a context of children. The purpose is to develop phonemic awareness. For this teachers should select familiar and interesting texts for drawing attention to the sounds of the words and letters, and not follow the alphabet in sequence. This is also based on the principle that young children should move from known to unknown age appropriate text.

### *Reading Fluency*

Refers to the ability to read a text with accuracy, speed (automaticity), expression (prosody), and comprehension that allows children to make meaning from the text. Many children recognise letters but read them laboriously, one-by-one. This hampers the process of understanding what is being read. Research links reading fluency to comprehension as to comprehend a sentence, children should be able to decode it in about 12

seconds. It leads to a quantitative model of reading efficiency that has a simple and transparent monitoring indicator. (Helen Abadzi, 2006, World Bank Report)

### *Culture of Reading / Inclination towards Reading*

Involves the motivation to engage with a wide variety of books and other reading materials. Children should be able to appreciate good literature and be able to respond to it in informed ways. Even incredibly young children demonstrate this by expressing interest in handling books, looking at illustrations and trying to “pretend” read. For developing the culture of reading the participation of family, community and school is important. The cultural of reading also promotes democratic values and personal social relationship for responsible citizenry in later years.

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

a. *Creating a Print Rich Environment:* In a print rich classroom, children have many opportunities to interact with various forms of print. The displayed text needs to be meaningful, inviting, and relevant for the children. A class can be made print rich by labelling objects or places, writing children’s names, displaying samples of children’s emergent writing, creating word walls, labelling pictures related to the theme. The reading corner/reading area is a significant place for language learning and exploration.

Various child-friendly components such as poem corners, message boards, theme boards, various charts like class responsibility chart, mid- day meal chart, chart of stories etc., display boards (children’s writings, drawings, collections, variety of texts, pictures with captions, instructional material developed by teacher etc.) may be developed and displayed on walls at the eye level of children.

b. *Read-aloud* is a practice where teachers, parents, and caregivers pick up an engaging story from a book and read it out. Variations in pitch, tone, pace, volume, pauses, eye contact, questions, and comments make for a fluent and enjoyable experience for children. Reading aloud develops their listening skills along with their interest in understanding the story. This session should be followed up by conversation with children and writing/drawing task.

#### **THINGS TO REMEMBER**

- ***Read aloud the story in an interesting manner.***
- ***Reading focused on text direction and words***
- ***Creating Book awareness and way of handling a book***
- ***Material must be displayed & changed on a regular basis***

c. *Listening, Telling and Writing Stories and Poems:* Stories – whether they are about real events or about events imagined by someone- bring new



material to the attention of the children and becomes interesting material for literacy development. The teachers can provide children with the pleasure of listening to the stories. The skill of telling can only develop with time and practice. It is important to select age appropriate, interesting, stories related to children's familiar context and surroundings. And no story needs to be a single occasion. Good stories deserve many re-tellings. Discussion on the story can be initiated on the messages, perceptions, impressions which children gather from the story. The freedom to recreate a story and its characters in a way that is meaningful to child should be promoted. A teacher should create opportunities for children to talk about a story in any way they like, to extend it, substitute its characters, and to make up their own stories.

d. *Songs and Rhymes:* Children enjoy songs and rhymes. The rhyming words in the rhymes help children notice and play with oral language and construct their own words enriching their vocabulary. Activities like storytelling, rhymes and songs, free and guided conversations help children develop phonological awareness, vocabulary development, listening comprehension skills along with developing their attention span.

e. *Sharing Experiences:* Children need to be given ample opportunities to participate in teacher-initiated conversations about their experiences with pets around them, characters/events of the stories, cartoon films, cleanliness, and favourite food.

f. *Drama and Role Play:* When children are given the opportunity to engage in drama and role play, they learn to express themselves as well as learn new words. Drama is invariably a part of children's own traditional play activities and games. A story or part of the story can be enacted. It enriches all the skills of language learning-LSRW (Listening, Speaking, Reading, Writing). Children can be involved in creating props, writing, and reciting short dialogues, invite/poster etc. It helps in becoming effective communicator and developing interpersonal skills and facilitate bonding with others.

g. *Picture Reading/Talk:* With the help of picture books, and other relevant collection of pictures made available to children creates opportunities for reading with meaning making and speaking about them.

h. *Shared Reading:* In shared reading, big books with relevant illustration and text are read in pairs or by the teacher involving children. The book has large font, illustrations, and simple text so that all children can participate in reading and talk about the story. This also builds up their vocabulary, sense of directionality while reading. This also facilitates peer reading. Shared reading is important for early literacy and most effective for Grade 1 and Grade 2 children.

i. *Activities based on Reading and Writing Corners:* Every class should have a reading corner/reading area with a variety of age-appropriate

children's literature. Children should be provided enough time and opportunities to spend time with the books. There should be stationery and art craft material for self-expression.

j. *Use of Classroom Wall:* Various activities can be designed around the stories and poems read by the children. They can draw pictures, list familiar and unfamiliar words, and display them on the walls of the classroom. Green strips (Haripatti) can be used for writing, drawing by the children. These strips can also be used to display the works of children, attendance chart and other informative and interesting materials to motivate children to read and write.

k. *Experience Based Writing:* Daily experiences of classroom or outside world are important opportunities of writing. Some prescribed time of the class may be devoted daily to share the experiences of the previous day in class and to write them. Further, the learners may be encouraged to write their own daily in their own words. They may also be given opportunities to develop stories and poems from their own experiences.

***Teacher must spend more time with children who are struggling to read. Mixed groups could also be made where weaker children benefit from peer support.***

l. *Mid-day Meal:* It is also one of the routines with which children have a deep connection and they take keen interest in it. Different activities can be planned around this. For instance, a teacher can draw pictures of food, utensils etc. and initiate conversation on mid-day meal, eating habits, health and hygiene, nutrition, junk food, foods of different cultures, plants, and environment, etc.

m. *Use of Textbook and other Resource Materials:* Teachers may use textbook and other resource materials including, stories and poems to provide opportunities of writing. Careful planning can make a connection between these textbook lessons and children's literature available in the class and children can enjoy the material related to one content/subject. If the writing activities related to textbook are made more interesting and meaningful instead of traditional question-answer and fill in the

#### THINGS TO REMEMBER

- ***Each day the teacher may select one of the activities suggested for oral language***
- ***Activities to be conducted not only in Class 1 but in all primary classes***

blanks, writing will soon become interesting medium of expression. Further, use of different resource materials like, posters, story books and poems may provide ample opportunities to learners to engage with written text and will surely facilitate the process of writing.

Children need to be exposed to a range of children's literature for independent reading, shared reading as well as read aloud. These are critical for children to develop sustained literacy skills as well as develop critical thinking, imagination and creativity. There is a need to have carefully selected books that are suitable for children with varying age group, reading abilities and diverse interests. There should be relevant, age appropriate books in the Functional library, which may be set up in every FLN class. This will be active and dynamic where teachers and children can share their books. This may include UDL books. The criteria for the selection of children's literature should be determined and there should be space for literacy activities. The books should be kept within the reach of the children.

#### **Emphasis to be given to child's Home language**

The focus of oral language should be development of the child's first language or Home Language (HL) while providing exposure to the School Language (SL). HL should continue to be used and developed in the early primary classes while helping children acquire strong oral and literacy skills in the SL. Oral language activities have to include both children's HLs and SL.

#### **Developing Literacy Skills in Third Language/English**

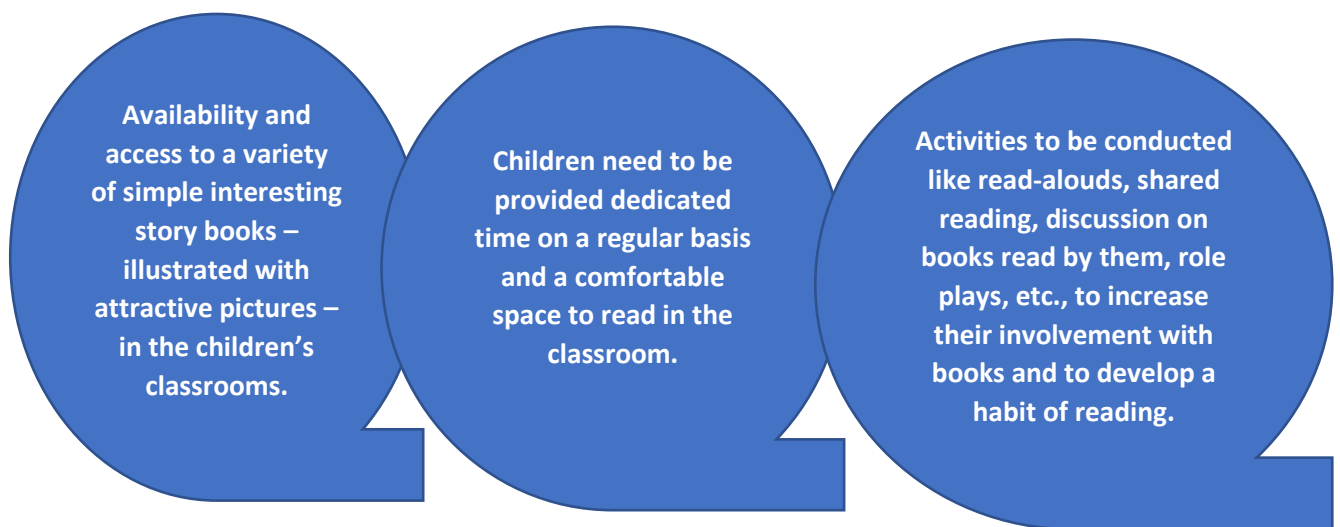
- a. The pre-existing knowledge of language helps in building literacy skills in languages. Children who have a strong foundation in their home language can learn second and third languages more easily. The literacy engagement for third language/English language learners requires connectivity and linkages to what they know in their first language. However, children do not become literate automatically; careful and sensitive planning is essential; Presenting language as story reading and storytelling, in the first language, and in English ensures authentic engagement with meaning, and unconscious acquisition of recurring language. It also promotes aspects of language use ranging from punctuation, spelling, and paragraphing, to reading and writing multi-lingually.
- b. The recitation of rhymes gives them an understanding of implicit music/sounds in words and pleasure in the rhythm. This activity motivates children to pursue learning the language.
- c. Reading texts which are translations of what they have read in their mother tongue or first language into English facilitates their comprehension leading to developing vocabulary in English.

d. In the above context, the teacher should allow the use of code-mixing and code-switching to children for expressing themselves. This is essential for ensuring the development of creative and even critical thinking among children.

e. The context of texts in English should not be culturally and socially alien to children because this will hamper the process of meaning-making. The multilingual scenario becomes a resource for learning English specifically in situations where its reach is minimal. In such a situation teacher must take note of words which children speak in English and weave some activities around them. All such activities should be followed first in the child's language in the form of facilitation.

f. On-going assessment of children's knowledge acquisition and skills helps teachers develop meaningful and outcome-oriented learning plans. A significant challenge for the teacher is to create interest in reading in English beyond the textbook curriculum which children may find difficult to access. Provide them opportunities to express themselves in more than one language or their first language and English. Let children make use of their prior knowledge in LSRW by engaging them in pre-reading while reading and post-reading reflections.

### **How to Develop Reading Habit among Children?**



#### **When children's home language is different from school language**

- Extended period for oral language activities in home language and school language including storytelling, read-aloud, shared reading conversations, rhymes and songs, etc.
- Introduction of basic vocabulary in school language in the oral language activities.
- Using home language to support teaching-learning of school language and promoting mixed language use.

## EXEMPLAR -I

Topic	Sounds Together
Theme/Layer	<b>Phonological awareness:</b> Putting together the sounds to form words, and how to write the letter for each word. The students can use their knowledge from what they learned and apply this when putting together sounds.
Goal	Children become effective communicators
Competency	Phonological awareness Sound symbol association
Learning Outcome	<p>ECL2-1.5 Identifies familiar sounds in the environment</p> <p>ECL2-2.5 Identifies a few letters and sounds</p> <p>ECL2-3.5 Recognizes letters and corresponding sounds</p> <p>ECL2-4.5 Forms letters correctly, uses sound-symbol correspondence to write invented spellings.</p> <p><i>(This exemplar is too exhaustive and there are four learning outcomes. It should be taken as a unit plan for the teaching of English. It is suggestive and the teachers are advised to choose preferably only one learning outcome in a 30 to 40-minutes class)</i></p>
Content/Descriptor  Material required:	<p>The teacher uses the textbook Chant Series lesson two about Letter sounds. A video link of the jolly phonics website <a href="https://youtu.be/mWDVD9DeXUM">https://youtu.be/mWDVD9DeXUM</a> to watch the video.</p> <p>Animal alphabet chart, Flashcards, real objects, crayons. Word walls, labeling pictures related to the theme, print-rich environment, pictures with captions, worksheets.</p>
Actionables/Guidance to teachers	<p>The teacher starts to blend easier 3 letter words, as consonant-vowel-consonant or CVC for easier blends such as c-a-t, t-o-p, b-u-s, d-e-n, etc.</p> <p>The students follow and once the student has a strong foundation for blending CVC words well, the teacher can move onto 4 letter words with 4 sounds or with a vowel or consonant blend with 3 sounds. Most students learn best in 3s, so try to use this rule of thumb for the most effective teaching. Identify the sounds in words:</p>

m a p



"/m/"

m a p



"/ă/"

m a p



"/p/"

The other methods of sounds together are:

The visual association, auditory association and kinesthetic association.

This is an important prerequisite skill for decoding words, which is key in reading. There are three components of the association: the name, the sound, and the integration with the keyword. For each component, the child should go through the target pack of cards.

The Name:

The child sees a letter card and says the name of the letter.

Example dialogue:

Teacher: (showing m card) Tell me the name of this letter.

Student: m

Teacher: (showing t card) What is the name of this letter?

Student: t

Example dialogue:

Teacher:(showing m card) Tell me the sound of this letter.

Student: /m/

Teacher:(showing t card) What is the sound of this letter?

Student: /t/

### The Integration

Child sees a letter card and says the letter name, key word, and sound.

Example dialogue:

Teacher:(showing m card) Tell me this key word and sound.

Student: m, monkey, /m/

Teacher:(showing g card)

Student: g, goat, /g/

### **The auditory association**

*This is an important prerequisite skill to encoding or spelling. The child hears the sound and gives the name of the letter, or he hears the name and then provides the sound. In this association, he does not look at the cards.*

The Name

The child sees a letter card and says the name of the letter.

Example dialogue:

Teacher: What letter has the /p/ sound?

Student: p

Teacher: What letter has the /t/ sound?

Student: t

Or,

Teacher: /m/

Student: m

Teacher: /h/

Student: h

The Sound



Child hears letter name and says its sound (no cards are used).

Example dialogue:

Teacher: What's the sound of p?

Student: /p/

Teacher: What's the sound of k?

Student: /k/

Or, as an alternative when the student is accustomed to the drill technique:

Teacher: m

Student: /m/

Teacher: a

Student: /ã /

The Integration

Child hears a letter name and says the letter name, key word, and sound, using the key words to facilitate recall of the association.

Example dialog:

Teacher: m

Student: m, monkey, /m/

Teacher: a

Student: a, apple, /ã /

### **The kinesthetic association**

*This association is an important prerequisite for written spelling. During this procedure, the student traces, copies, or writes the letter after hearing either the letter name or the letter sound.*

The Name

Child sees a letter card or hears the letter name and traces or writes the letter, saying the letter name as she traces or writes the letter to help solidify the link.

Example dialogue:

Teacher: Write m.

Student: (writes the letter m, saying) /m/

Teacher: (showing t card) Write t.

Student: (writes letter t, saying) /t/.

The Sound

Child hears the letter sound and traces or writes the letter, saying the letter name as he traces or writes the letter to help solidify the link.

Teacher: Write the letter that has the /m/ sound.

Student: (writes the letter m, saying) /m/.

The exercises used here are the same as for Association 1, the visual association. The difference is that the student simultaneously writes and says her response. The student can vary the writing practice by:

Writing

Tracing letters written large on a chalkboard/whiteboard (using a vertical plane)


and

Writing the letters in the air relying more on his own bodily-kinesthetic modalities.

	<p><b>Air writing and writing the letter independently on paper</b></p> <p>A variety of activities should be used at different points within the learning sequence. Writing while saying the name has a multisensory impact: it connects a motor movement with vision (seeing the letter card) and with auditory (hearing yourself say the name).</p> <p>Air writing is of critical importance for dyslexic and dysgraphic students and serves several purposes. Air writing also serves to strengthen the motor memory for the form of the letter, providing large muscle input. Students can be encouraged to imagine the letter as they air write it, thus strengthening their imaging skill, which will lead to greater automaticity. In addition, air writing is an efficient group teaching technique since it allows the teacher to monitor several students at once. When the students respond on paper, the teacher is only able to monitor the end product, not the process, for most of the students.</p> <p>When introducing air writing to the students, tell them, “This time when you say the letter name, I want you to write the letter ‘t’ in the air. Write it big. Use two fingers as your pointer and keep your wrist and elbow fairly straight. I want you to be able to really feel the movements you make while you are writing the ‘t’ in the air. I will write it with you. (Teacher needs to stand facing the class and make her ‘t’ backwards so that the students may follow the movements). Now say the key word and sound for this letter as we write it in the air.”</p> <p>Student(s): (air writing t) “t, tiny, /t/.”</p> <p>Teacher: “Can you imagine the letter in the air where you wrote it? See it there.” If students cannot image the letter easily, use additional cues such as the following:</p> <p><b>Visual</b></p> <p>Pretend your fingers leave a shadow as you write your letter. See the shadow.</p> <p>Pretend your fingers leave a bright red line as you write your letter. See the line.</p> <p>Pretend bright green spaghetti comes out of your finger as you write the letter. See the spaghetti.</p> <p>Pretend brightly colored Silly String is coming out of your finger as you write the letter. See the string. What color is yours?</p>
<p>Assessment: assessment for</p>	<p>Observe students during the whole group portion of the lesson to assess if they are able to recognize letter names, sounds, and word blending. Collect student</p>


learning and assessment as learning.	work samples to see if students accurately matched the recognized and wrote the letter names and sound perfectly.
Exit:	Display additional images and have students turn and talk to a partner to practice identifying letters and pronouncing sounds correctly.

## EXEMPLAR -II

Topic	Foundational language and Literacy
Theme/Layer (Oral Language)	Includes improved listening comprehension, oral vocabulary, and extended conversation skills. The experiences in oral language are important for developing skills in reading and writing.
Goal	Goal 1: Children maintain good health and wellbeing.(HW) Goal 2: Children Become Effective Communicators. (EC)
Competency	1. Development of gross motor skills (G1) 2. Creative self-expression and conversation (G2)
Learning Outcome	1. Takes part in exercise, play, and movements for fun and exercise. 2. Engages in conversation in school and home with unfamiliar teachers, new friends, school staff, other adults, etc in their own language.
Content/Descriptor	 <p style="text-align: center;"><a href="https://youtu.be/LXYBOTIo4bo">https://youtu.be/LXYBOTIo4bo</a></p>
Actionables/Guidance to teachers	<p>The teacher should explain the video to the children.</p> <p>The suggestive methodology is given below:</p> <ol style="list-style-type: none"> <li>1. “the rains are so beautiful. I love the rains... I love splashing in the puddles and making paper boats ... Do you like making paper boat, children?” YESSSSS!!!</li> </ol>


	<p>2. And what I love most are the animals we see during the rainy season.</p> <p>3. And we also know what do we wear to protect ourselves from the rain. Right?</p> <p>4. Encourage their answers and appreciate them.</p> <p>5. “So now we are going to meet Otto a little boy who loves the rains and see what he wants to do at home on a rainy day!!”</p> <p>6. Talk to the children about how they spend a rainy day.</p>
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### EXEMPLAR - III

Topic	Functional Literacy
Theme/Layer	Writing
Goal	G1: Children maintain good health and wellbeing. G2: Children become effective communicators.
Competency	<ul style="list-style-type: none"> <li>• Fine motor development and eye hand coordination.</li> <li>• Early Literacy Skills.</li> </ul>
Learning Outcome	Takes part in exercise, play and movements for fun/exercise.
Content/Descriptor Material Required.	 <p>Molded Clay. Flour/dough. Piece of a wire.</p>
Actionables/Guidance to teachers	<ul style="list-style-type: none"> <li>○ Teacher reminds students about linear and curved shapes with the help of a piece of wire.</li> <li>○ The teacher writes first five letters on whiteboard.</li> <li>○ The teacher asks the students to identify curved letters.</li> <li>○ He/she arranges the students in groups and provide them the material – flour(dough)/moulded clay and ask them to make the curved letters out of that.</li> <li>○ The teacher then makes dots on paper and asks students to trace these dots to make/write these letters.</li> </ul>
Assessment	Assessment through observation. The teacher observes the involvement and hands on material to reflect the shapes of curved line letters.




### EXEMPLAR - IV

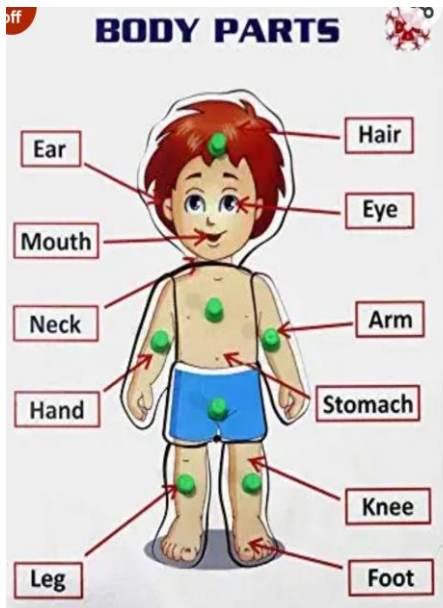
<b>Topic</b>	Foundational Literacy
<b>Theme/Layer (Oral Language)</b>	Oral Vocabulary
<b>Goal</b>	1. Health and Wellbeing 2. Effective communicators
<b>Competency</b>	Development of fine motor skills and eye-hand coordination Development of oral vocabulary
<b>Learning Outcome</b>	(HW 5.13b) Identifies the locally available variety and different tastes. (ECL1 5.4)Creates rhyming words and words with similar sounds orally.
<b>Content/Descriptor</b>  <b>Material required:</b>	 <p>Flash cards, chart with picture of sense organs.</p>
<b>Actionables/Guidance to teachers</b>	<p>Students will sit in a semi-circle. A box with flashcards will be passed on, on playing a rhyme. once the rhyme got stopped on a particular student, he will draw a flash card with written word(sense) from box and paste it on a chart with appropriate word(organ)</p> <p>Rhyming words will be formed by students;</p>

	See-bee, out-bout, cow-how, ear-hear,smell-bell,taste-haste etc																																			
Assessment: assessment for learning and assessment as learning.	<p>Assessment technique/Tool; Observation/Checklist</p> <table border="1" data-bbox="715 488 1516 1137"> <thead> <tr> <th data-bbox="715 488 871 622">FOOD</th> <th data-bbox="871 488 1066 622">RHYMING WORD</th> <th data-bbox="1066 488 1219 622">SOUR</th> <th data-bbox="1219 488 1366 622">SALTY</th> <th data-bbox="1366 488 1516 622">SWEET</th> </tr> </thead> <tbody> <tr> <td data-bbox="715 622 871 712">Butter</td> <td data-bbox="871 622 1066 712"></td> <td data-bbox="1066 622 1219 712"></td> <td data-bbox="1219 622 1366 712"></td> <td data-bbox="1366 622 1516 712"></td> </tr> <tr> <td data-bbox="715 712 871 801">orange</td> <td data-bbox="871 712 1066 801"></td> <td data-bbox="1066 712 1219 801"></td> <td data-bbox="1219 712 1366 801"></td> <td data-bbox="1366 712 1516 801"></td> </tr> <tr> <td data-bbox="715 801 871 891">Biscuit</td> <td data-bbox="871 801 1066 891"></td> <td data-bbox="1066 801 1219 891"></td> <td data-bbox="1219 801 1366 891"></td> <td data-bbox="1366 801 1516 891"></td> </tr> <tr> <td data-bbox="715 891 871 981">Lemon</td> <td data-bbox="871 891 1066 981"></td> <td data-bbox="1066 891 1219 981"></td> <td data-bbox="1219 891 1366 981"></td> <td data-bbox="1366 891 1516 981"></td> </tr> <tr> <td data-bbox="715 981 871 1070">Cake</td> <td data-bbox="871 981 1066 1070"></td> <td data-bbox="1066 981 1219 1070"></td> <td data-bbox="1219 981 1366 1070"></td> <td data-bbox="1366 981 1516 1070"></td> </tr> <tr> <td data-bbox="715 1070 871 1137">grapes</td> <td data-bbox="871 1070 1066 1137"></td> <td data-bbox="1066 1070 1219 1137"></td> <td data-bbox="1219 1070 1366 1137"></td> <td data-bbox="1366 1070 1516 1137"></td> </tr> </tbody> </table>	FOOD	RHYMING WORD	SOUR	SALTY	SWEET	Butter					orange					Biscuit					Lemon					Cake					grapes				
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## EXEMPLAR - V

Topic	Foundational Literacy
Theme	Oral Language
Goal	1.Children maintain good health and wellbeing. 2.Children become effective communicator.
Competency	<ul style="list-style-type: none"> <li>• Development of pro-social behaviour</li> <li>• Participation in individual and team games.</li> <li>• Social-myself, family, school etc.</li> </ul>
Learning Outcome	<ul style="list-style-type: none"> <li>• Takes active part in exercise, play and activities.</li> <li>• Expresses himself/herself in socially accepted or approved ways.</li> </ul>
Content. Material required	 <p>Sight Words Hide &amp; Seek Game, Paper Glasses, Few small sized(objects) toys like teddy bear or small balls or marbles.</p>
Actionables/Guide to teachers	<ul style="list-style-type: none"> <li>• The teacher needs to choose five to six sight words that he/she needs to teach to students.</li> <li>• Just label these words on the cups or the container you are using for this activity.</li> <li>• Show each word to your students , read aloud and ask the students to follow you so that they learn these words.</li> <li>• Then make your students close their eyes or simply ask them to turn around.</li> <li>• Then hide the toy/object under one of the cups.</li> <li>• Now ask one student to find out the toy under the cup and the student is supposed to read aloud the word written on the cup he/she moves.He/she moves the cups while reading aloud the words written on them till he finds out the hidden object.</li> <li>• Now repeat the activity with rest of the students.</li> <li>• By increasing the rigour you can help the students to frame sentences out of these sight words.</li> </ul>

## EXEMPLAR - VI

<b>Topic</b>	Foundational Literacy
<b>Theme / layer</b>	Writing
<b>Goal</b>	<ol style="list-style-type: none"> <li>1. Children maintain good health &amp; Well being.</li> <li>2. Children become effective communicator.</li> </ol>
<b>Competency</b>	<ol style="list-style-type: none"> <li>1. Development of healthy habits, hygiene, sanitation and awareness of self-protection.</li> <li>2. Write for self-expression.</li> </ol>
<b>Learning Outcome</b>	<ol style="list-style-type: none"> <li>1. Recognizes different body parts and uses various body movements.</li> <li>2. Write different body parts</li> </ol>
<b>Content / Descriptor Material required</b>	<p>Scrap chart , Smart Phone, Marker, Plain paper sheets.</p> 
<b>Video</b>	<a href="https://youtu.be/evXG5HuwIn0">https://youtu.be/evXG5HuwIn0</a>
<b>Actionable / Guidance to Teacher</b>	<p>Teacher pastes body parts on whiteboard.          Teacher reads aloud all the body parts pasted on a whiteboard.          Teacher now reads body parts with action and asks how to take care of the body part.          Like wash wash your hands before and after the meal.          Brush brush your teeth twice a day.          Teacher now asks students repeat the same.</p>
<b>Assessment : Assessment for learning and assessment as learning</b>	<p>The teacher observes the involvement of all students.          Teacher asks students to write five body parts on plain paper.</p>

## EXEMPLAR - VII

<b>Topic</b>	Foundational Literacy
<b>Theme/Layer (Oral Language)</b>	Oral Vocabulary
<b>Goal</b>	1.Health and Welbeing 2.Effective communicators
<b>Competency</b>	Development of fine motor skills and eye hand coordination Development of oral vocabulary
<b>Learning Outcome</b>	(HW 5.13b)Identifies the locally available variety and different tastes. (ECL1 5.4)Creates rhyming words and words with similar sounds orally.
<b>Content/Descriptor</b>  <b>Material required:</b>	 <p>Flash cards,chart with picture of sense organs.</p>
<b>Actionables/Guidance to teachers</b>	Students will sit in semi circle.a box with flash cards will be passed on, on playing a rhyme. once the rhyme got stopped on a particular student,he will draw a flash card with written word(sense) from box and paste it on a chart with appropriate word(organ/homophone)  Rhyming words will be formed by students;

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## Useful Resources

SAATHAQ: Students' and Teachers' Holistic Advancement Through Quality Education (NEP Implementation Plan, MoE  
[https://www.education.gov.in/sites/upload\\_files/mhrd/files/upload\\_document/SARTH](https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/SARTH)

AQ\_Part-1\_updated.pdf

[https://www.education.gov.in/sites/upload\\_files/mhrd/files/upload\\_document/SARTH\\_AQ\\_Part\\_2.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/SARTH_AQ_Part_2.pdf)

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UNICEF (2020), *Guidelines for Design and Implementation of Early Learning Programmes*

<https://www.unicef.org/india/media/2586/file/Guidelines-for-Design-and-Implementation-of-Early-Learning-Programmes.pdf>



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## 11. Understanding Foundational Numeracy and Mathematical Skills

### **This chapter discusses the:**

- Need for Early Mathematical Skills for developing logical thinking and reasoning
- Major aspects and components of Early Mathematics: Pre-Number Concepts; Numbers and Operations on Numbers; Shapes and Spatial Understanding; Measurement; Patterns; Data Handling; Mathematical Communication
- Pedagogical Processes to enhance Foundational Mathematical (Numeracy) Skills
- Assessment for supporting the learning of important mathematics and furnishing useful information
- Exemplar Rubric Curricular Area: Mathematics Task – Identification of Basic Shapes

### **Introduction**

#### a. *Foundational Numeracy:*

Foundational Numeracy means the ability to reason and to apply simple numerical concepts in daily life problem solving. When children acquire the following skills, it is said that they have developed number sense and spatial understanding. It includes the ability to:

- i. Make an understanding of quantities.
- ii. Develop concepts like more and less, and larger and smaller.
- iii. Establish relationships between single items and groups of items (seven means one group of seven items which is one more than a group of six items).
- iv. Use symbols that represent quantities (7 means the same thing as seven).
- v. Compare numbers (10 is greater than 8, and three is half of six).
- vi. Arrange numbers in a list in order: 1st, 2nd, 3rd, etc.
- vii. Visualise shapes and space around them.

#### b. *In general, the numeracy skill includes:*

- I. Solving daily life problems using four fundamental operations – addition, subtraction, multiplication, and division.

- II. Relating mathematical knowledge with the surroundings; applying logic to daily life, thereby developing ability to think mathematically, and taking logical decisions with reasoning.

### **Need of Early Mathematical Skills**

a. Numeracy is important for developing logical thinking and reasoning in daily life. We need numeracy to solve problems and make sense of numbers, time, patterns, and shapes etc. for simple daily life activities like cooking, traveling, playing, shopping, communication etc. These are not just skills, but life skills which every child should acquire and develop. Focusing on the basic numeracy skills in the foundational or early years will eventually improve the achievement of learning outcomes at later stages.

b. Dealing with numbers and spatial understanding are integral part of any communication and daily life discourse. Without being able to do basic calculations, a child cannot progress in the education system and eventually in life. No doubt some skills develop naturally with the daily life experiences and the context in which child grows, but a systematic intervention helps in building a strong understanding of mathematical ideas that lays a foundation for having better life skills like criticality, creativity, communication, and problem solving.

c. It is noteworthy that it is during early years that the mathematical foundations are laid and can be effectively complemented with the provision of relevant and meaningful learning experiences to the children. The major determining factors for effective foundational Mathematics learning are awareness and understanding of concept of early Mathematics skills among stakeholders, teacher's and teacher educator's competence, curricular flexibility, and availability of resource material for teachers and children through pedagogy that keeps child's contextual experiences at the center.

d. From a future perspective, research has also linked foundational numeracy to increased employability and higher GDP. It is directly correlated to increased workforce participation and opens opportunities for social and economic advancement. These basic skills make an individual well-equipped for facing life situations and have better life outcomes.

### **Major Aspects and Components of Early Mathematics**

- a. *During the learning of Mathematics at early stages, a child is expected to:*
  - i. Count and understand the numeration system.
  - ii. Learn conventions needed for mastery of Mathematical techniques such as the use of a base ten system to represent numbers.
  - iii. Perform simple computations in her/his own way up to three-digit numbers and apply these to their day-to-life activities in different contexts.

- iv. Understand and use standard algorithms to perform operations of addition, subtraction, multiplication, and division on numbers up to three digits.
  - v. Learn vocabulary of relational words to extend his/her understanding of space and spatial objects.
  - vi. Identify and extend simple patterns starting from repeating shapes to patterns in numbers.
  - vii. Collect, represent, and interpret simple data/information in his/her daily life activities.
- b. *These have been put into 7 major themes:*
- i. Pre-Number concepts
  - ii. Numbers and operations on numbers
  - iii. Shapes and Spatial Understanding
  - iv. Measurement
  - v. Patterns
  - vi. Data Handling
  - vii. Mathematical Communication

The early Mathematics skills associated with each topic are elaborated further along with opportunities for enhancing these skills.

### **Pre-Number Concepts**

Mathematicians and psychologists have often argued that before children start counting objects or develop an understanding of number, they need to be able to classify, order and set up one-to-one correspondences to some extent. Since these skills are preliminary to the understanding of numbers, they are called as a pre-number concept.

The following are the essential requirements for counting:

- Every time when objects in a group are counted the objects are classified into two subgroups of objects counted and to be counted.
- While counting is done it is important to organise or serially arrange the objects so that neither an object is counted more than once, nor some objects are left uncounted.
- Number names in order or serial need to be known before attempting to count.
- A one-to-one correspondence is established in the groups of objects and the numbers like for every group there is a corresponding number and for every number a group can be formed.

Children grow up counting their toys, toffees, people at home or other small sets of objects. They are often asked who has more/less or are there

enough objects in their regular conversations. So, when schools begin to develop the understanding of pre-number concept, they should build upon the child's experience from his/her familiar context.

- a. *Classification* involves putting together things that have some characteristics in common. So, when organising tasks on classification, we must make sure that the activities are meaningful to them and, they are familiar with the objects which she/he must classify. Initially children should be encouraged to classify on one property/characteristic only. Gradually, complexity of the task should be increased where they can classify on more than one property such as colour, size, shape etc. This will later help them in understanding number sense.
- b. *Seriation* involves ordering a set of objects according to some rule. Intrinsically, it also involves ordering objects in two directions. For example, the child applies the relations 'bigger than' and 'smaller than' at the same time. It also means understanding the logic of transitivity which means that if A is more than B and B is more than C, then A is also more than C. Seriation also forms the base for understanding of patterns. Thus, it should be build using the objects from the familiar contexts of children and initially using 3 objects only. Gradually, children should be presented with more objects to seriate.
- c. *One-to-one correspondence* involves matching or pairing of objects. For building upon the understanding of one-to-one correspondence, children need to understand the meaning of 'many and few', 'more than/ less than' and 'as many as'. Teachers need to design tasks contextual to child's context so that the child relates and uses them in daily life experiences.

Thus, while introducing a concept, we should devise as many different activities as possible with variety of materials, so that children can correctly glean and generalise it. At every point they should be encouraged to talk about what they are doing and how they are doing it giving them ample space to express. Teachers need to use concrete material and toys available around the child in providing opportunities to develop above pre number skills. 3.3.2

### **Numbers and Number Operations**

- a. All children must have ample opportunities of developing the ideas of numbers and operations on numbers in their local context within and outside their syllabus.
- b. Numbers are the mathematical tool to count and measure. Numbers are used in many forms. Three major types of numbers are Cardinal numbers, Ordinal numbers, and Nominal numbers.

- Cardinal numbers are used to measure and communicate the size of a group of objects, e.g., 30 students of class V went for a picnic.
- Ordinal numbers are used to describe the position of an object when they are arranged in a specific order, e.g., Fourth child from the left has brown hair.
- Nominal numbers are used as nouns/labels to identify the object in a group, e.g., Train number 2298 has just left.

c. The key skills that come under this category are number sense, reading of symbols, writing words and symbols, comparison of numbers like bigger than/smaller than etc., fundamental operations - addition, subtraction, multiplication, division, and their applications in daily life.

d. Problems involving operations such as addition, subtraction, multiplication, and division are not merely abstract uses of numbers. These operations have wider applications in daily life. The operations of addition and subtraction are complementary to each other. The addition is a combination/aggregation of distinct sets of like entities while subtraction is the exact opposite, i.e., take away or left over from a set of elements. Similarly, multiplication and division are also complimentary to each other. Multiplication is done by repeated addition while division by repeated subtraction. These operations are not just to develop computational abilities in children but to use them as tools for problem solving in daily life context. This would feed into the higher aim of mathematics as a problem-solving tool.

The problems which commonly use addition and subtraction involve an increase or decrease of some quantity, combination of two or more objects and comparison of objects. A common strategy to represent subtraction problem are “take away”/ “left over” problems. There are some informal strategies in dealing with addition and subtraction of small numbers as it helps to build a “number sense”. These operations are useful to interpret, represent and solve simple problems in daily life context.

a) By acquiring these skills, the child should be able to achieve the following-

- Quantification: Counting objects in a collection (Visualization, Generalization) Counting as a means for solving problems such as determining quantity/ comparing (Problem Solving)
- Associate number concepts, vocabulary, quantities and writing numerals to communicate (Communication)
- Abilities to combine, separate and name “how many” concrete objects leading to operations of addition and subtraction for small collections (Problem solving, Communication)

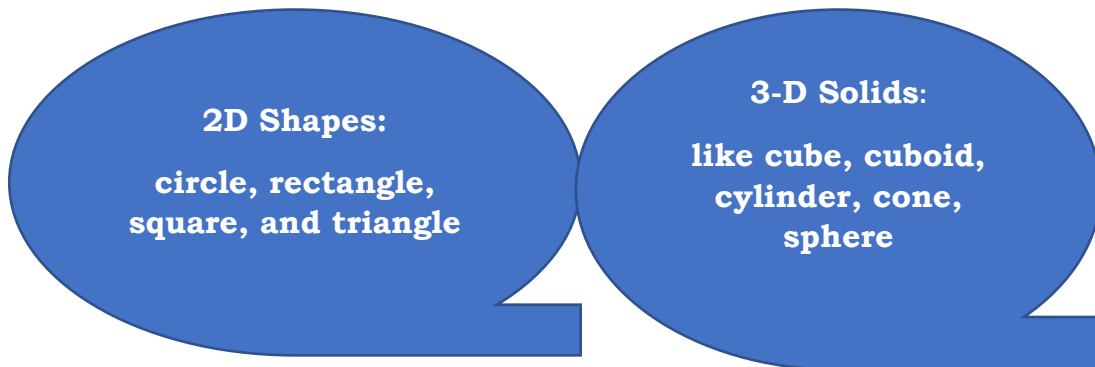
- b) The following approaches can be followed to achieve these skills: -
- ✓ While teaching numbers, concept of groups of tens should be used using a variety of objects like sticks, pencils etc.
  - ✓ Involve children in matching and sorting objects using one-to-one correspondence and ordering objects that vary in colour, size, or other parameters
  - ✓ Encourage children to count different groups of objects and to think about quantity and number.
  - ✓ Use strategies that help children learn to count accurately and efficiently such as pointing to/touching/moving each object being counted.
  - ✓ Draw attention to numbers and how they are used such as house addresses, prices of objects marked on packets, etc.
  - ✓ Use words related to estimation – more than, less than, about, nearly, approximately, and in between.
  - ✓ Ask children to estimate or how many by looking at a group of objects. Encourage them to test for the actual answer.
  - ✓ Play games that include counting and using numbers like simple board games, card, or dice games etc.
  - ✓ Give children problem solving situations involving combination, taking away, equal distribution of objects so that they can make the concept of addition, subtraction, multiplication, and division.
  - ✓ Engage students with some fun loving and learning based activities so that they can develop the concept of different operators.
  - ✓ Encourage children to use the vocabulary like together, take away, number of times, equal sharing.

## **Shapes and Spatial Understanding**

a. *Spatial understanding:*

Spatial understanding is the area of mathematics that involves shape, size, space, position, direction, and movement. It helps describe and classify the world we live in. Spatial sense gives children an awareness of themselves in relation to people and objects. The key concepts include 3D shapes and solids, flat and curved surfaces of solids, 2D shapes as seen on surfaces of a solid shape e.g., straight lines, curved lines, shapes made up of straight lines, curved lines etc. e.g., triangles, quadrilaterals, circles etc.

- b. *By acquiring these skills, the child should be able to achieve the following:*



- Observe the objects in the environment and get a qualitative feel for their geometrical attributes.
- Use her own vocabulary to describe space and the shapes of various familiar objects.
- Identify various elements of an object such as edges, corners and faces while exploring and playing with them.
- Explore and communicate the association between an object (3D) and its shape (2D)
- Draw simple shapes on paper and trace and explore the outlines of objects on paper.
- Trace her way in space by talking of direction and spatial relationships.

Since children are familiar with the shapes of objects around them, it is better to explain differences between shapes by making a connection with other objects like this is round like a ball etc. When children use their own language or common vocabulary, they can communicate what they find through their explorations. It helps them to generalize and to understand the concept better. Later, they can relate this base of understanding to the formal mathematical vocabulary. Children can be taken on exploratory walk to the nearest places and then asked to draw its map using the various landmarks they observed during the walk.

***The teachers may follow the approaches given below:***

- *Encourage children to identify different shapes as they draw, look at different objects, work with puzzles, building with blocks.*
- *Give children many opportunities to handle objects such as blocks, boxes, containers, shape sorters and puzzles.*
- *Encourage children to climb in and out of boxes or large block structures, on or around outdoor equipment, and over, under, around, through, into, on top of, and out of different things to experience themselves in space.*

- Encourage children to make new shapes by putting materials together and taking them apart in different arrangements. They can do this by moulding clay playing with blocks.
- Introduce spatial vocabulary, including location and position words – on/off, over/under, in/out, above/below, front/behind, top/bottom, movement words – up/down, forward/backward, toward/away from, straight/curving, distance words – near/far, close to/far from, shortest/longest, etc.

## Measurement

### a. Measurement in daily life situations:

There are numerous situations that we encounter in our daily life which involves dealing with quantities, for example, buying clothes, constructing wooden items and buildings, cooking a meal for guests etc. Children are often involved in activities like comparing their heights, checking whether there are enough sips of water left in their water bottle, how much time is left for the lunch break, refusing to lift a heavy item, and letting hot milk to cool down before consuming it, and so on. In this way children acquire an informal understanding of several physical attributes such as length, weight, volume, time, and temperature. Measurement is an inherent part of human life, whether being used in the accomplishment of routine work or in an occupation. Thus, familiarity with different contexts of measurement is important for functioning effectively. This majorly contains the understanding of the following attributes of measurement.

- Length/distance Weight/mass
- Volume/capacity
- Time
- Temperature



### b. Planning learning of measurement:

We should use the experiential learning of children, and natural context to develop and plan learning activities. Focus should be made on designing activities that have inbuilt challenge in the form of a problem which children can easily relate to and find interesting. As children start to learn the various attributes of measurement, they are introduced to vocabulary of comparison.



Learning starts with comparing an attribute of objects directly (comparing length of a pencil and a scale) and then moves to indirect comparison (comparing length and height of the blackboard). While teaching indirect comparison, we use another intermediary object, for example, a string could be used to compare the length and height of the blackboard. Later, they should be introduced to non-standard units such as the hand span or a stick.

c. *Comparing and measuring:*

There is a big difference between comparison and measurement as measurement involves the use of number. The number describes how many matchsticks longer is a pencil, how far is my school from home, how many cups full of water will fill a jug completely, how many peas will balance a potato etc. Efforts should be made to ensure that children understand the necessity of unit of repeat in measurement, so that they will understand the importance of standard units. Later when they will be introduced to instruments used for measuring like ruler, weighing scale, clock, thermometer etc. they will not simply read the readings but know how they have been constructed and why we use them.

While comparing and measuring, children should be encouraged to make a guess or do a visual estimate first, and later to verify their guess or estimate by carrying out more systematic comparison or measurement (or by using a specific instrument). For example, let children guess whose arm is longest among them. See what all ways they suggest for comparison, and provide them with some strings, matchsticks, paper strips, etc. Let them think and select the most suitable way. Help them use it and finally reach the answer. Children can be shown two different shaped containers filled with unequal amount of water (not much difference in amount of water) and can be asked to guess which has more/less water. Observe what arguments they put up to justify their answers and have an elaborate discussion. Provide them some identical glasses and prompt them by asking, 'can we use these glasses to find out which bottle has more water?'

d. *Approaches for teaching measurement:*

Thus, measurement is a skill that is inherently activity-based. There is plenty of opportunity for children to measure and to work in groups. Measurement involves both understanding and skill. The following approaches may be followed by teachers:

- Give ample opportunities to use language of comparison - use appropriate attribute words for different situations.
- Let children figure out their own units for measurement. Children better understand standard units like metres, centimetres, grams, litres, etc when they have lots of experiences working with their own ways of measuring and comparing in non-standard units.

- Involve children in activities such as block building, cooking, crafts and other experiences that involve measurement.
- Look for opportunities to help children make comparisons and measurements of volume, height, weight, length and temperature in day-to-day conversation
- Provide simple experiences that help children begin to develop an understanding of time concepts by comparing how long different activities take. Start with daily time references (after the story, before lunch) and proceed to more abstract concepts (yesterday, tomorrow, months, years, etc.)

## **Patterns**

### a. *Patterns in our daily lives:*

Patterns are all around us. The word pattern is used in almost every context of our daily lives such as decorative designs, figures, motifs, shapes etc. Mathematically, a pattern is an arrangement, order, sequence, or repetition. The sequence of daily activities forms a pattern in a child's life that the child can recognize. Patterns can also be seen in numbers, shapes, sounds etc. Arrangement, repetition, and order are important in many branches of Mathematics. Patterns can be identified based on color, shape, size, etc.

### b. *Patterns in mathematics:*

As patterns are all around us, it is important to develop the understanding of pattern. Identification of the pattern helps in enhancing observation and analytical skills as while identifying pattern, one observes the similarities, dissimilarities, repetition, non- repetition, growth/decay etc. Describing patterns helps in enhancing vocabulary and improving language which is one of the important aspects in mathematics learning.

### c. *Pattern Types:*

Patterns can be identified based on a particular rule. For example, counting numbers have a pattern- each number is one more than the preceding number and each number is one less than the succeeding number. Patterns can be of many types like sound patterns, number patterns, patterns in shapes, patterns in colours, patterns based on symmetry etc.

### d. *Four steps to teaching patterns:*

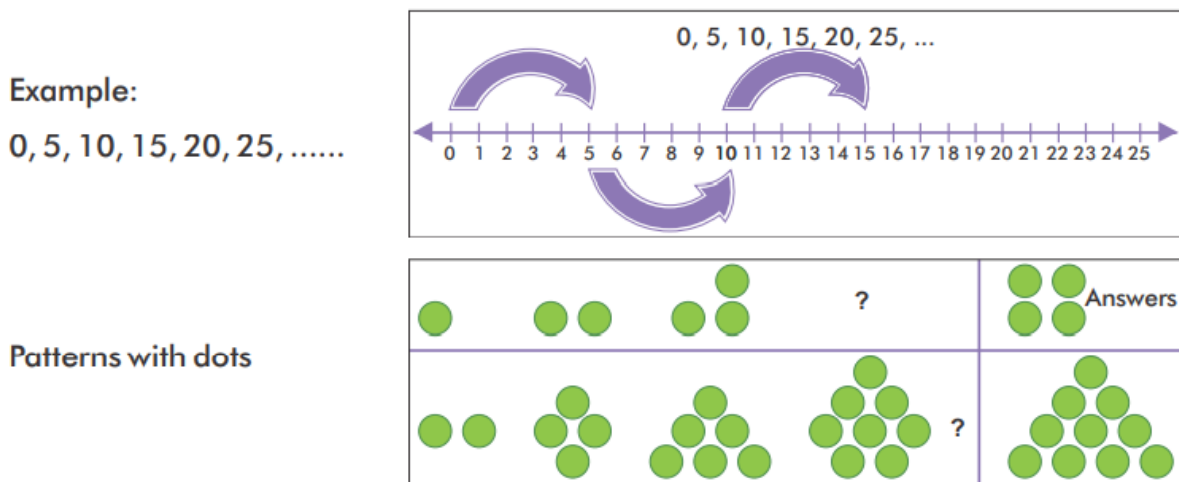
Working with patterns usually consists of four major steps. Teachers need to conduct appropriate activities within and outside classrooms to develop the conceptual idea of Patterns among children. Some suggestions are:

- Identifying pattern: Pattern can be identified by observing the rule which the pattern is following for example, if it is a repeating pattern, progressing pattern etc. like 1,2,1,2... or 2,5,8,11, ....

ii. Describing the rule: After identification of pattern, next step is to describe the rule and identifying the unit of repeat (In case of repeating patterns). Let children see patterns around them and form rules to extend like patterns on sarees, tiles, borders, etc.

iii. Extending pattern: Further extending the pattern by using the unit of repeat. For example, in the pattern 1, 2, 3, 1, 2, 3, 1, 2, 3, the unit of repeat is '1, 2, 3'. So, by recognizing this unit of repeat, the pattern can be extended further as '1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, and so on'. Similarly, for any repeating pattern, once the unit of repeat is recognized by the child, he/she can easily extend the pattern.

iv. Creating new patterns: Once the child can achieve the above three steps, child can start creating new patterns by identifying, analyzing, extending and exploring patterns further and using his/her own creativity.



## Data Handling

a. *Data in everyday life:*

Data refers to information in a raw form which is collected from various sources. Having access to data and the capacity to interpret data can be a source of power. The availability of data, which is reliably and systematically collected, makes a system transparent. This is important for a democratic society. It is only when people have confidence in their own capacity to handle and interpret data that they will also seek data.

We collect data when we need to answer a specific question, a problem or when we want to understand a situation in generality. This may be because we need to decide. It is noteworthy that though data answers some questions, at the same time it raises further questions which cannot be answered from the data. Data collection and handling are usually thought of as a part of

statistical activity and so only of interest to people specializing in statistics. We rarely acknowledge the fact that in everyday situations, we are collecting and using data. A teacher is collecting data even when she takes the attendance of children in her class.

b. *Data components:*

The major components of data handling include collecting, representing, and interpreting simple data, recording data using tally marks, collecting data, and representing in terms of pictograph, choosing appropriate scale and unit for display through pictographs, drawing conclusions from the data.

c. *By acquiring these skills, the child should be able to achieve the following:*

- I. Attempt to record information in her/his own way.
- II. Participate in discussions with others to draw inferences from the recorded information.
- III. Devise ways to present the recorded information in such a way that its interpretation can be made simpler.
- IV. Show/describe problems in the interpretation of information.
- V. Devise pictorial ways of representing information like pictograms and bar graphs.

d. *The following approaches should be followed:*

- a. Organise activities and provide opportunities to record information in numbers and to draw inferences or make decisions out of it.
- b. Involve children in discussion to highlight the importance of recording of information.
- c. Create situations such that child uses her/his ways to record and present the information in a meaningful manner.
- d. Give opportunities to children for exploring ways of recording and presenting data and draw inferences from the data.
- e. Encourage children to participate in activities and discussion, raising questions, making interpretations, etc.
- f. Engaging students with group assessment where students work as a group and collect and present data and draw inference based on it.

### **Mathematical Communication:**

Mathematical communication refers to a process by which information is exchanged between individuals through mathematical symbols, signs, diagrams, graphs. It encompasses both listening and reading (comprehension) and both speaking and writing (expressions).

*a. Understanding Mathematical Communication:*

Language plays a crucial role in the construction of knowledge and in the learning of mathematics as well. Every discipline has a specialized language. Mathematics also borrows words from everyday language but gives them special meanings. When the children begin solving simple problems presented through words in the mathematics class, they begin working with mathematics language. 'How many?' 'How many altogether?' 'How many are left?'- all these are examples of the use of mathematics language. Children mix such mathematical language with their ordinary, everyday language while discussing a mathematical problem.

Children learn by constructing their knowledge through interaction with their environment. A critical part of constructing knowledge is the communicating of ideas with peers and others. Initially such communication takes place in and through child's home language. While sharing, new thoughts and ideas are generated. While doing any activity, the child tries to understand her/his own or others' actions and this happens when children communicate with each other. This communication is possible only through a language that the children are comfortable in. For example, while exploring a spherical object, the child may relate it with laddoo and calls it 'laddoo jaisa', instead of 'golakaar'. Notice that when the children use the phrase, 'laddoo jaisa', for a spherical object, they are making correct categories. b. The following approaches may be followed by teachers to enhance mathematical communication:

- Use simple, friendly, and clear language that relates with home language.
- While giving oral and written instructions use blackboard and ask questions or shapes a discussion.
- While introducing mathematical ideas, symbols and signs a careful connection is required to develop with child's own language.
- If teachers make a conscious effort to analyse the language that they use to communicate with children and use language wisely, a big change can be seen in the teaching-learning process.
- Appropriate opportunities need to be provided to all children to communicate their ideas through newer terminology in a stress free and friendly environment. Initially children should attempt to use mathematical language without any fear of being wrong. Gradually they will improve their mathematical communication with time and concerted opportunities.

## **Pedagogical Processes to enhance Foundational Mathematical (Numeracy) Skills:**

### a. *Important Mathematical Skills:*

Quality Foundational education should work on developing the following mathematical skills in children through the early mathematics concepts such as Observation, Reasoning, Visualization, Generalization, Communication, Critical thinking, Problem-solving, Creativity and Collaboration. Such pedagogical processes should be adopted inside and outside the classroom which provide equal opportunities to all children despite their socio economic and cultural background. The teachers and parents have to devise/design appropriate activities and material contextual to child's surroundings and experiences. All activities and interaction with children should focus on experiential learning and use of manipulative and concrete material.

### b. *Some of the suggested processes are given as under:*

- **Learner Centric Pedagogy:** A change in the role of teachers from information providers to facilitators must be done. This should also be re-emphasized in the curriculum, textbooks, and teacher training curriculum, which should focus on development of skills rather than content. It should enable child to solve other real-life situation problems too and not just textbook problems.

- **Providing scope for Exploration and Mathematical Thinking:** The classroom environment should cultivate the spirit of exploration and visualization of concepts that lead to mathematical thinking. Different ways of calculations and strategies for problem-solving need to be explored (other than employing standard algorithms) along with many diverse ways of communicating the results of exploration. The teacher should create situations/contexts for creating understanding and exploration.

- **Use of Manipulative /Toys (Toy Pedagogy):** Providing hands on experience is an integral part of mathematics, especially in the lower classes. It provides an implicit understanding of concepts in children which a child may not get when told explicitly. Toys and manipulatives also help children in visualising of concepts. Many indigenous toys are generally available in every child's surrounding. These should be used as important resource of teaching and learning of mathematical skills.

- **Mathematics with daily life:** Pedagogy should be such that the understanding with real-life applications is given more space, like including life application projects and assignments. Assessment of these projects and assignments should be part of the all-round year long school-based assessments.

- **Medium of instruction:** The language which a child brings from home, plays a big role in mathematics classroom. The instruction should be given in home language, so that he/she can easily understand it. Mathematics learning should not seem like learning some foreign language for the child.

No doubt, a strong linkage of the home language with the language of mathematics will help the child in understanding and communicating mathematical ideas.

- **Integrating mathematics with other subjects:** Mathematics is not only a subject, but also a language which is used in learning of all other subjects like different languages, environment, science etc. Short stories, poems, rhymes, simple riddles usually involve different aspects of our life and provide opportunities to think holistically and link mathematics with other subjects or vice-versa.

- **Communicating Mathematically:** Creating a classroom environment that provides confidence among students to raise doubts, ask questions, participate in discussions, and share her/his thoughts and imagination. An environment should be created where the child expresses his/her observations, understanding and the teacher is moulding that understanding mathematically. The skill of meaningful problem posing need to be enhanced to think and communicate mathematically. For example, the teacher can ask the students to describe their position in mathematical terms – I have three people in front of me and four behind, or I am sitting at one of the corners of a square, etc.

- **Giving space to alternate strategies supporting Problem Solving:** Creating facts and formula – not promoting rote learning of facts, formulae and procedures should be encouraged in a mathematics classroom. Instead of emphasizing on standard algorithms, the teacher should encourage diverse ways of problem-solving with peer learning and collaborative learning. A teacher should provide support and confidence to the students when they struggle with problem-solving so that mathematics anxiety is avoided.

- **Joy in Mathematics (Recreation with Mathematics):** Mathematics curriculum needs to emphasize on experiential learning and provide scope for learning flexibility by integrating the use of poems, rhymes, stories, riddles and puzzles, local art and culture, music, dance, rap songs, cooking, and games, etc. to help students enjoy the learning.

- **Space for errors in child's room:** In all mathematics classrooms, every response/question of the student needs to be treated with respect. Care needs to be taken about discussing them with the class. Such an environment would encourage students to raise questions and voice their doubts. Moreover, child's errors provide a window to the teacher and parents to understand child's thinking and the way she/he is progressing in learning mathematics.

- **Collaborative learning:** Collaborative or group learning should be practiced with students i.e., learning from each other and helping each other to learn. Such an approach would have the teacher focus on many other aspects of the classroom. Peer learning also helps children in developing conceptual understanding and mathematical communication without any fear and hesitation.

**Exemplars mapped with goals, competencies, and Learning outcomes:**

<b>Topic</b>	Foundational Numeracy
<b>Theme/Layer (Oral Language)</b>	Number Concept and comparison thereof
<b>Goal</b>	<ul style="list-style-type: none"> <li>• Children become involved learners and connect with their immediate environment</li> </ul>
<b>Competency</b>	<ul style="list-style-type: none"> <li>• Sensory development: sight, sound, touch</li> <li>• Sense of order (4 digit number)</li> <li>• Numeral recognition (4 digit number)</li> </ul>
<b>Learning Outcome</b>	<ul style="list-style-type: none"> <li>• 6.11: Reads and writes number names and numerals (up to 9999)</li> <li>• 6.6: Applies seriation</li> </ul>
<b>Content/Descriptor</b>  <b>Material required:</b>	<ul style="list-style-type: none"> <li>• Activity by the students</li> <li>• Mask of cat/ tiger/ lion</li> <li>• Tags/ placards/ masks made in class to be tied on head or pasted on the back of students (0 to 9)</li> <li>• Markers with bold Th H T O</li> </ul>
<b>Actionables/Guidance to teachers</b>	<ul style="list-style-type: none"> <li>• A student will be kept on left with a tag of cat/ tiger/ lion to eat or catch a zero tagged child</li> <li>• At a time four students with number tags will be asked to come in front of the class and each or selected child will be asked to name the number arrangement formed on four spots</li> <li>• Children will be asked to rearrange the given numbers(members) and read and write the numbers either on board or the note book</li> </ul>
<b>Assessment: assessment for learning and assessment as learning.</b>	<ul style="list-style-type: none"> <li>• Simultaneous correction by peers in class and repeating activity till correction is done</li> </ul>



Topic	Foundational numeracy
Theme/layer	Addition of single digit numbers.
Goal	G1: children maintain good health and well being G2: children become effective communicators G3: children become involved learners
Competency	<ul style="list-style-type: none"> <li>• Development of fine motor skills</li> <li>• Eye-hand coordination</li> <li>• Active participation in-game type learning</li> </ul>
Learning outcome	Children Add one-digit numbers
Content/descriptor	<ul style="list-style-type: none"> <li>• Flash cards</li> <li>• Straws</li> <li>• Currency notes</li> </ul>
Guidance for teachers/Actionable-s	<p>Be my companion or friend</p>
Assessment: assessment of learning and assessment as learning.	$2+3=5$ $3+8=11$ $4+6=10$


Topic	Foundational numeracy														
Theme/layer	Data handling														
Goal	<ul style="list-style-type: none"> <li>• Concept formation</li> <li>• Development of motor skills</li> </ul>														
Competency	<ul style="list-style-type: none"> <li>• Participation in individual and term games</li> <li>• Concept formation -special numbers ,sizes and shapes</li> </ul>														
Learning outcome	<ul style="list-style-type: none"> <li>• Demonstrates eye-hand and neuro-muscular coordination and motor fitness.</li> <li>• Compares and classifies objects/pictures.</li> </ul>														
Content/descriptor	<ul style="list-style-type: none"> <li>• Books of different subjects</li> <li>• Notebooks of different subjects</li> <li>• Pencils and pens etc</li> </ul>														
Guidance for teachers	<ul style="list-style-type: none"> <li>• First teacher will collect different items related to the topic and put them on the table.</li> <li>• The teacher will ask the children to sort them separately into groups (like items together)</li> <li>• Teacher will now ask the students to count them separately and make it in a tabular form and mark the number as tally and frequency</li> </ul>														
Assessment: assessment of learning and assessment as learning.	Criteria: rubrics <table border="1"> <thead> <tr> <th></th> <th>L1</th> <th>L2</th> <th>L3</th> </tr> </thead> <tbody> <tr> <td>Concept of grouping</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Identification of object</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				L1	L2	L3	Concept of grouping				Identification of object			
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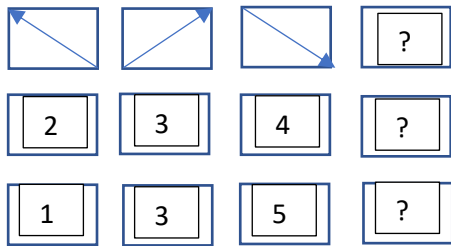
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Content/descriptor	<ul style="list-style-type: none"> <li>• Flash cards</li> <li>• Straws</li> <li>• Currency notes</li> </ul>
Guidance for teachers/Actionable-s	<p>Be my companion or friend</p>
Assessment: assessment of learning and assessment as learning.	$2+3=5$ $3+8=11$ $4+6=10$


Topic	<b>Foundational literacy.</b>
Theme / Layer	
Goal	<ol style="list-style-type: none"> <li>1) <b><u>To maintain health and well being.</u></b></li> <li>2) <b><u>Effective communicator</u></b></li> </ol>
Competency	<ol style="list-style-type: none"> <li>1) <b><u>Development of fine motor skills.</u></b></li> <li>2) <b><u>Early literacy skills</u></b></li> </ol>
Learning Outcome	<ol style="list-style-type: none"> <li>1. <b><u>Controls finger and hand movements.</u></b></li> <li>2. <b><u>Recognizes alphabets and corresponding sounds</u></b></li> </ol>
Content Descriptor/ Material required	<b>Activity</b> <ol style="list-style-type: none"> <li>1. <b>Concrete blocks of first five alphabets.</b></li> <li>2. <b>Plate and Moong Dal</b></li> </ol>
Actionables / Guidance to Teachers	<ol style="list-style-type: none"> <li>1. <b>The teachers writes the first five alphabets on the board.</b></li> <li>2. <b>He also shows them concrete blocks of these alphabets.</b></li> <li>3. <b>Then he asks students to write these alphabets on the plate with the help of Moong Dal. Which has been provided to them.</b></li> </ol>
<b>Assessment:</b> Assessment as learning.	<b>It involves assessment as learning. The student assesses himself /herself against what he has seen on the board and felt with the concrete blocks of alphabets.</b>

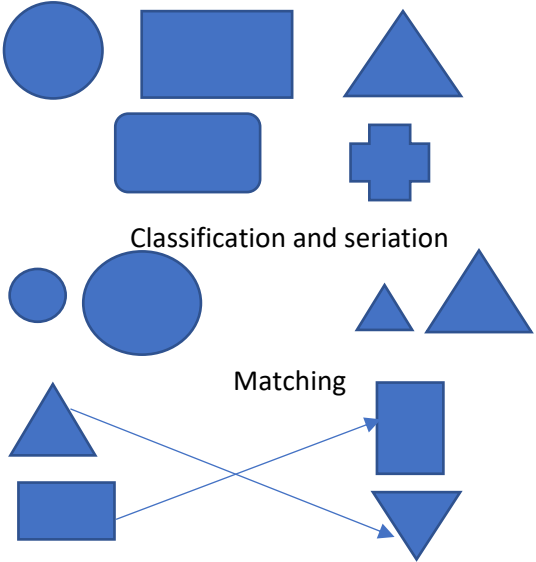
Topic	Foundational numeracy												
Theme/layer	Data handling												
Goal	<ul style="list-style-type: none"> <li>• Concept formation</li> <li>• Development of motor skills</li> </ul>												
Competency	<ul style="list-style-type: none"> <li>• Participation in individual and term games</li> <li>• Concept formation -special numbers ,sizes and shapes</li> </ul>												
Learning outcome	<ul style="list-style-type: none"> <li>• Demonstrates eye-hand and neuro-muscular coordination and motor fitness.</li> <li>• Compares and classifies objects/pictures.</li> </ul>												
Content/descriptor	<ul style="list-style-type: none"> <li>• Books of different subjects</li> <li>• Notebooks of different subjects</li> <li>• Pencils and pens etc</li> </ul>												
Guidance for teachers	<ul style="list-style-type: none"> <li>• First teacher will collect different items related to the topic and put them on the table.</li> <li>• The teacher will ask the children to sort them separately into groups (like items together)</li> <li>• Teacher will now ask the students to count them separately and make it in a tabular form and mark the number as tally and frequency</li> </ul>												
Assessment: assessment of learning and assessment as learning.	<p>Criteria: rubrics</p> <table border="1"> <thead> <tr> <th></th> <th>L1</th> <th>L2</th> <th>L3</th> </tr> </thead> <tbody> <tr> <td>Concept of grouping</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Identification of object</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		L1	L2	L3	Concept of grouping				Identification of object			
	L1	L2	L3										
Concept of grouping													
Identification of object													

TOPIC	FOUNDATIONAL NUMERACY
THEME	Measurement
GOAL	G1: children maintain good health and well being G2: children become effective communicators G3: children become involved learners
COMPETENCY	<ul style="list-style-type: none"> <li>• Fine motor development</li> <li>• Eye hand coordination</li> <li>• Creative thinking</li> <li>• Vocabulary</li> </ul>
LEARNING OUTCOME	SWBAT <ul style="list-style-type: none"> <li>• know one litre</li> <li>• 500ml</li> <li>• 250ml</li> <li>• 200</li> </ul>
CONTENT/DESCRIPTOR	Mugs ,bottles of (one litre, 250 ml, 500 ml, 200ml, 100ml) 
GUIDANCE FOR TEACHERS	Teacher will explain that <ul style="list-style-type: none"> <li>• 1l= 1000 ml</li> <li>• <math>\frac{1}{2}</math> l= 500 ml</li> <li>• 1l =250 ml + 250 ml + 500 ml</li> <li>• 1l = 250ml + 250 ml + 250 ml + 250 ml</li> <li>• 1l = (200+200+200+200+200) ml</li> </ul> Fill the 1 litre bottle with the above combinations. Ask questions like Is 500 ml equal to $\frac{1}{2}$ L yes or no How many 250 ml bottles make 1 L

Topic	Foundational numeracy
Theme/layer	Pattern
Goal	G1: children maintain good health and well being G2: children become effective communicators G3: children become involved learners
Competency	<ul style="list-style-type: none"> <li>• Fine motor skills</li> <li>• Eye hand coordination</li> <li>• Creative and logical thinking and reasoning</li> </ul>
Learning outcome	<ul style="list-style-type: none"> <li>• Students will be able to understand patterns</li> <li>• SWBA to know reasoning , think logically</li> <li>• SWBA to understand rule of pattern</li> </ul>
Content/descriptor	Match sticks or any other similar material Flash cards of numbers
Guidance for teachers	<p>Teacher will explain patterns with some concrete examples</p> 



Topic	Foundational Numeracy.
Theme/Layer	Playing with Coins.
Goal	G2. Students will become Effective Communicators. G3. children become involved learners and connect with their immediate environment.
Competency	-Decision-making and Problem solving -1 to 1 correspondence -Number operations (addition)
Learning Outcome	-4.1 Uses own language/ school language to express their needs and ask questions to gain information. 5.14 Develops their own strategies to add two or more than two numbers(notes/coins) and applies them to solve simple daily life problems/situations.
Content/Descriptor	-Some cards with different prices on them (Spending on your child's knowledge of addition you may want to start easy then work up to more challenging amounts). -Some items for sale. This could be anything! From trains, dolls, or food! It always helps if it's something your child will want to buy! -Some real money or plastic coins.
Actionable/Guidance to Teachers	The best thing is to have fun! Ask your child what they would like to buy. Be the Shopkeeper and request the amount from them. If the price was Rs.167, question your child as to what Coins and Notes could they add together to make Rs.165? This ongoing game just a few times daily or weekly will really enhance your child's knowledge and confidence when dealing with money. What was your child's best buy?!
	
Assessment	Peer assessment to observe each other's responses to understand the concept of adding notes and coins.

Topic	Foundational numeracy
Theme/layer	Pre-number concept
Goal	G1: children maintain good health and well being G2: children become effective communicators G3: children become involved learners
Competency	<ul style="list-style-type: none"> <li>• Development of eye hand coordination</li> <li>• Participation in individual and team games</li> <li>• Creative and critical thinking</li> </ul>
Learning outcome	<ul style="list-style-type: none"> <li>• Children identify identical shapes</li> <li>• Colour identical shapes with same colour</li> <li>• Match identical shapes</li> <li>• Count the number of objects</li> </ul>
Content/descriptor	<ul style="list-style-type: none"> <li>• Bring some random objects</li> <li>• Prepare some shapes with paper and cardboard</li> <li>• Show some videos on shapes for pre number concepts</li> </ul>
Guidance for teachers	<p>Teacher will show some shapes of objects like balls, triangles, spoons, circles etc.  Teacher will show some identical shapes  Teacher will relate them in correspondence  Teacher will classify them as circles, triangles etc .  Teacher will arrange the shapes as big to small to smaller (seriation)</p>  <p>The diagrams illustrate three activities: 1. Classification and seriation: A collection of various blue shapes including a circle, a rectangle, a triangle, a rounded rectangle, and a cross. Below this, two circles of different sizes and two triangles of different sizes are shown to demonstrate seriation. 2. Matching: A diagram showing a blue triangle on the left and a blue inverted triangle on the right, with arrows indicating they are a pair. Another blue rectangle on the left and another blue rectangle on the right are also shown, with arrows indicating they are a pair.</p>

### Useful Resources

[The Department of Education and Skills, LITERACY AND NUMERACY FOR LEARNING AND LIFE: The National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020.   
https://www.education.ie/en/Publications/Policy-Reports/lit\\_num\\_strategy\\_full.pdf](https://www.education.ie/en/Publications/Policy-Reports/lit_num_strategy_full.pdf)

[Danahy, Laurie Early Numeracy \(2020, April 27\)   
https://www.olaweb.org/assets/documents/csd\\_EarlyNumeracy.pdf](https://www.olaweb.org/assets/documents/csd_EarlyNumeracy.pdf)

Fuson KC (1988). Children's counting and concepts of number. New York: Springer-Verlag

Gelman R, & Galistel CR (1978). The child's understanding of number. Cambridge, MA: Harvard University Press.

Bisanz J, Sherman JL, Rasmussen C, & Ho E (2005). Development of arithmetic skills and knowledge in preschool children In Campbell JID (Ed.), Handbook of mathematical cognition (pp. 143–162). New York: Psychology Press.

LeFevre J-A, Fast L, Skwarchuk S-L, Smith-Chant BL, Bisanz J, Kamawar D, & Penner- Wilger M (2010). Pathways to mathematics: Longitudinal predictors of performance. *Child Development*, 81, 1753–1767. [PubMed]

Purpura DJ, & Ganley CM (2014). Working memory and language: Skill-specific or domain-general relations to mathematics? *Journal of Experimental Child Psychology*, 122, 104–121. [PubMed]

## 12.LEARNING ASSESSMENT

### **This chapter discusses the:**

- Various modes of Assessment including School Based Assessment in Foundational Learning
- Assessment Domains: Physical; Language & Communication; Personal, Social & Emotional; Literacy; Mathematics; Understanding the World; and Expressive Art and Design
- Use of Observation & Portfolio in School Based Assessment and Holistic Progress Card (HPC)
- Conducting Large Scale Assessment in Foundational Learning: National Achievement Survey for FLN; Large Scale Assessment Domains

*After the dictation they put down their slates and I went through their writing. I found many words misspelt. Quite a few of them were unable to write conjunct consonants.*

*Their handwriting also left much to be desired.*

*I had made no corrections on their slates. These I returned after I had gone through them. The boys began to clamour, "How many mistakes have I made?" asked some, while others wanted me to give them ranks.*

*One of the boys said, " Now Laxmiram bhai will also teach us as other teachers do and give us ranks."*

*"I am going to do nothing of the sort," I said. "You all know how to write fairly well.*

*Try again tomorrow. Gradually you will learn to write well. And practice will help you to write well -I am sure of that. Anyway, what's the point of marking your mistakes?"*

*"But what about ranks?" asked one.*

*"Do I give you ranks when I tell you a story?" "No." "Do we have ranks when we play games?" "No."*

*"Some of you are tall, while others are short; does that mean ranks?" "No."*

*"Some of you are fat, some quite lean; does it imply ranks?" "Not at all."*

*"Some are rich, some are poor; does the school give ranks according to whether you are rich or poor?" "No."*

*"Then we just don't want the rank system at all. A person who can sing may sing our poems. He may try to recall the words when he forgets them. A person who does not know a game may observe others' and learn; and one who is good at a game may play for the pleasure of it. A child with a good handwriting may serve as a model to others who would like to improve their own. Those who are good at doing things can always teach others who are not so good. That's all!"*

*Excerpt from 'DIVASWAPNA' by Gijubhai Badheka*

## **Understanding Assessments**

- Assessment involves the gathering of information from all possible sources, regarding knowledge, skill, attitude, ability, and beliefs of the children, document the same and use this data to make informed instructional decisions, refine or restructure processes and ultimately improve the Children' learning.
- Assessment serves several related important intentions, including informing the teachers as to how to plan learning experiences, identify areas of learning and development where children may need support or extension, to quantify the gain in achievement of learning outcomes.
- Assessment serves the best interests of the child when all stakeholders, including the parents/care givers, teachers, administrators as well as the policy makers are involved in the process of understanding the data obtained through assessment. This involvement and collaboration are key ingredients to support children' learning and vital for system improvement.
- Assessment is important in all stages of learning but more so during foundational learning.

## **Assessment during Foundational Years**

- The period of foundational learning is a crucial phase for the development of intellect, ability, physical growth, mental maturity and values. The quality of education in this phase determines all future achievements and accomplishments. The nations known for excellence in school education like Finland and Singapore invest intensively in this stage.
- The primary purpose of assessment is to support and guide each child's learning from FYL-1 to FYL-6 (age group of 3 to 9 years). This is to support the teachers across the foundational stage to gather and share appropriate information about their children and pay specific attention to the traits that might lead to early signs of disabilities.
- Learning at the foundational years happen at varying rates and it entirely varies from child to child. It even varies across different developmental areas / subjects and it depends upon how an individual child responds and functions because the learning at this stage is majorly influenced by many social and cultural contexts. Assessing learning progress of children helps to identify children's strengths, needs, interests and preferences.
- Assessment is vital to track children's progress in a continuous and comprehensive manner using multiple techniques of assessment. Assessment aims at early identification of learning gaps at each foundational stage i.e., at FYL-1, FYL-2, FYL-3, FYL-4, FYL-5, and FYL-6 including children with special needs so that there can be possibilities of early intervention through referral to specialists.

- Assessment at this stage should essentially be designed to encourage each child's efforts to explore, observe and learn. The results of assessment are used for purposes of not only conveying about 'what has been learned' but also 'what factors had restricted the learning' and the 'altered strategies that would improve learning'. Assessment of child's learning should not be restricted to the four walls of the school but should permeate to their parents/ care givers, and to the community at large. The fundamental purpose of assessment is to use the data obtained through different sources to support, guide, and maximize each child's potentialities. The transaction of knowledge and the assessment must go side by side.

A holistic and purposive assessment is therefore 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.

Though the rate of learning (and hence development) varies from child to child, the sequence of the process of learning remains similar. The ability to learn and the pace of this learning are affected by factors like health, nutrition, sense of safety and levels of love and affection, involvement and participation of the family, school, and the community.

Continuous interaction and collaborative effort are required with the parents/care givers. Involvement of the parents is vital to achieve maximum learning and development of competencies in the child. Enrolment into a school system is certainly not the end-all of the parent's responsibility towards their child's education. They must actively engage themselves in encouraging the child to learn from their home surroundings as well as outdoor experiences. Parents/care givers need to monitor the child's progress, growth, and development in all spheres, taking active interest and participation, celebrate their success and form a support system in events of temporary setback or when the going becomes stormy.

### **The Three Goals and Assessment**

- The foundational years of education has three developmental goals as discussed in earlier chapters that comprises of 'prime learning areas' such as physical and motor development, socio-emotional development, language and literacy, cognitive development (mathematical understanding and numeracy as well as understanding the world), spiritual and moral development, art and aesthetic development which are interrelated and interdependent. Development in these learning areas make child competent to deal with complex life situations and all these areas have been subsumed into three major goals which are briefly discussed here: -

- These ‘prime learning areas’ are considered as different subjects as the child moves to early primary grades i.e., class-1 or at the FY-4,5 and 6 stage. However, it must be noted that all these six stages should be continuum. All these areas are intimately intertwined with each other and should be assessed to support the process of learning at this stage.
- The teaching learning strategies need to be planned around these three goals and these goals support the foundational years of learning of ALL children. These learning areas are mentioned above under the three goals. The system is comprehensive, providing behaviors to observe, a systematic way to collect anecdotal remarks, and a means to draw conclusions about the children’s performance to plan instruction.
- Testing children or grading their work should not be encouraged during foundational learning. The FLN curriculum promotes the idea of encouraging children and helping them to develop a positive self-image, gain confidence in their own abilities and individual progress at one’s own pace. Also, children do not have to repeat the class, regardless of their attainment levels.
- Assessment is the process which is integrated with the teaching-learning processes and principally aimed at empowering the teacher to see the individual child as well as collective impact of the classroom transactions and attaining the desired leaning outcomes as intended in the in the three developmental goals mentioned in earlier chapters.
- ***Assessment during the foundational stage can be broadly categorized into two major areas, namely:***
  - a. School Based Assessment (SBA) by the teachers: for assessment of the individual child’s progress.
  - b. Large-scale achievement survey: for assessment of the processes and functioning of the educational systems (such as NAS, SAS, and Third-Party Assessments).

### **School Based Assessment**

- In School Based Assessment (SBA), the teacher herself devises the assessment tasks along with the children to evidence the learning continuum (as opposed to standardized tests where at the state/national level, where the assessment is designed centrally). School-Based Assessment (SBA) is principally aimed to see the individual as well as collective impact of the classroom transactions, and experiences at home in attaining the desired leaning outcomes as intended in the curriculum. The school-based assessment helps monitor the quality of education in a decentralized manner.
- Standardized tests administered by the state/national level cannot be a replacement for SBA. SBA is all about assessing the quality at the micro level through assessment tasks created by the class teacher in accordance with the requirements of the class/child.

- SBA system of assessments, done by the teachers, works more in favour of the child than the rigours of sitting for one-time exams. In SBA, the child has an equal partnership in the assessment process and involves use of techniques like observation by the teacher, maintenance of individual child's portfolio to document progress, peer assessment and self-assessment.
- The success of SBA is dependent on the capacity of the teachers and degree of autonomy provided to the teacher to assess her class in creative ways. Therefore, in SBA, the teacher is the primary facilitator and emphasis is on empowering the teachers by providing complete autonomy to them to assess the child's performances, aptitude, attitude interest and achievements.

### **School Based Assessment in Foundational Learning**

- School Based Assessment at the foundational stage should be stress-free and largely through qualitative observation based on performance of the child in a multitude of experiences and activities. It should be through day-to-day observation and documentation of stated outcomes achieved as well as children's development in terms of their health and nutrition status, their participation and involvement in learning experiences, artwork, games and exercises, music and movement etc. including their behaviour in classroom and outside. Assessment at this stage is done to recognize and encourage strengths, identifying areas that need additional support, and addressing learning/developmental gaps.
- 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. Assessments, when designed properly, can support, and not just measure, children' learning, building their competencies and granting them the feedback they need. Therefore, the learning assessment during the foundational years cannot be limited to a paper pencil test at the end of the academic year. The assessments done should necessarily be communicated to the parents/ care givers at appropriate pre-determined intervals.
- Also, it is important to remember that the learners bring their own individual approach, abilities, and interests to the learning situation. In SBA the teacher familiarizes herself with the individual child's culture, language, learning preferences, family background, and socioeconomic level and design assessments based on the same. Understanding the context in which the child grows and develops has an important impact on learning and helps design assessment tasks free from cultural biases.
- The learning outcomes outlined in chapter 05 for Foundational year level 1 to 6 (FYL1 to L6) are arranged in a spiral and progressive continuum to enable teachers to track the progress of these learning outcomes. However there is also a need to assess progress of learning at different levels of a learning outcome within a class. The fact, that all children learn on their own pace and



style, also need to be kept in view while assessing children on each of the learning outcomes. They may show their progress at different levels. Experiences of working with children show that children often show learning progress at the following levels as given in the table:

<b>Level 1</b>	<b>Level II</b>	<b>Level III</b>	<b>Level IV</b>
Trying to achieve the learning outcome with teachers' support in the given time frame	Achieves the learning outcome with teachers' support in the given time frame	Achieves the learning outcomes on her/his own	Achieves the learning outcomes and helps and supports others to achieve the learning outcomes and require more challenging tasks

There may be 5-15% of children who need support and teachers need to take this fact in cognizance and plan intervention to support these children accordingly. These children may belong to different socio-economic contexts including linguistic background. Also, there may be gifted children in the same class, for whom teachers need to plan more challenging tasks.

### **School Based Assessment in Foundational years under 3 Goals**

The foundational learning has primary areas of focus, which are intimately intertwined with each other and should be assessed by the teacher through SBA to support the process of development during foundational years. These prime learning areas are subsumed in the three developmental goals of foundational learning described in the previous chapters:

#### **Goal 1: Children Maintain Good Health and Wellbeing**

This goal continues to provide experience for health and wellbeing, physical and motor development socio emotional development, nutrition, hygienic practices and safety from FY1-FY6. Assessment under this goal needs to keep in view the following:

- Physical and motor development is an important area consists of development of gross motor skills (jumping, hopping, etc.) and fine motor skills (drawing, colouring, threading beads, etc.), which affect educational advancement in the child. This must be ensured by the parent and the school system.
- Exercises and games must be designed and encouraged that give strength, coordination, flexibility, and endurance. Enhancement of gross and

fine motor skills is essential for the child's ability to work on activities demanding e -hand coordination. Thus, physical ability becomes a vital part of the child's assessment in the early years.

- Aspects of hygiene to maintain good health include observation of practices and habits such as washing hands before and after the meal, covering mouth while coughing, throwing the litter in the dustbin, taking bath regularly, etc.
- Keeping objects, toys, etc. in an organised manner - Children follow what they see, so the teacher needs to work with them to keep things at the right place, then only it will become a habit with the child. Cleanliness is a value which is 'caught' and cannot be 'taught'. If a child watches mother taking her shoes off on returning from work, and keeping it properly before entering the room, the child learns to do so. Teacher can observe the child's habits in ensuring that they keep their belongings back to the appropriate place.
- Social and emotional progress is based on the experiences that the children gather, reactions to pleasant and unpleasant stimuli through verbal and non-verbal expressions, learning to regulate their emotions, and the initiation of relationships with others. These processes of regulating emotions and consequent behaviour as a part of interaction and communication need to be documented as part of the progress card.
- Gregariousness (enjoying the company of others) gets developed around the age of six, when children are ready to spend time with their peer and in groups. Using the techniques of peer assessment and self-assessment provides great insights into the child's world and their personal, social, collaborative, and emotional development.
- All forms of creativity, art and design are an integral part of foundational learning, such as, poetry, rhymes, songs, music (vocal or percussion/string /wind instruments), drawing and painting, puppetry, clay modelling, papercraft, toy- making, choreography, etc.
- Every child must be exposed to various art forms and the teacher must actively watch for interest, ability, aptitude, imagination and creativity, expression and correlation with outer environment and inner values, within the child. The same must be noted, necessary encouragement and opportunity must be provided by the school system as well as through communicating the same to the parents.
- It must form an important and integral part of the child's assessment and final sharing. For example, the use of paper toy-making or paper folding activities for assessing the child, helps to understand as to whether the child can follow the sequences and imitate the behaviour demonstrated by the teacher. The finesse of the artwork produced and the ability to perceive the details are some of the assessment criteria which can be demonstrated by the paper folding activities. Origami is the process of producing an

aesthetically designed finished product by following sequencing and eye hand coordination. It introduces the child to the power of imagination coupled with the dexterity of the hand to transform a simple raw product into an object of delight, of use and beauty.

## **Goal 2: Children Become Effective Communicators**

Once the foundations of language and literacy are laid during the preschool stage (3-6 years), this goal leads to subject- first/second language for example Hindi/state language/English. Following need to be considered under this goal for assessment:

- The mother tongue of the child must be the Language of communication (if not the medium of instruction) with the child in school in the formative years, so that the child does not suffer any confusion in understanding the transactions and is able to grow with free expression.
- The ability to communicate must be developed both as the initiator as well as the receiver. This means that the child may be assessed in perceiving the need to communicate, forming the idea to be communicated, use of the appropriate words, verbalize them in a manner that is understandable and substantiate the communication with appropriate facial expression and body language and finally receive verbal and non-verbal feedback from the receiver.
- Three important aspects of communication are listening, to empathise and the need to collaborate. Assessment tasks may be designed to gauge these aspects along with other aspects in holistic manner.
- Giving importance to non-verbal communication, the child may be exposed to the different emotions and the gestures, which were part of our rich Indian culture. Assessment tasks may be developed to identify the bhavas and the mudras and further ask the child to elicit situations in which the bhavas and mudras are observed. Sign language may also be used for this purpose.
- The development of a 'sense of humour' is an important area connected to the development of language and communication, which should be encouraged so that it develops gradually as the child grows.
- The importance of foundational literacy has been established beyond any debate to be an important contributor to future success in academics, decreased failure rate, better overall scholastic achievements, and generally greater adult life success.
- The developmentally appropriate exposure to language and foundational literacy at this stage has a direct correlation to the future ability to read. Literacy assessment is all about whether the child can read fluently with comprehension. The reading text may be a road sign, a poster, grocery wrapper, train schedule given in the platform etc. For example, the child may

be asked to read a poster as shown below, followed by asking simple sentences relevant to the poster such as, 'what does the poster tells us to do?'

- The assessment rubric may be developed by the teacher including three four levels as per the needs:

Beginner - Whether the child can locate the information given in the text, Progressing - The child can interpret the information located in his/her own words, Proficient - The child can value the information as being useful or not so useful.

Advanced - Whether the child can use the information.

These four levels of assessment of reading comprehension help the teacher to design the interventions targeting the level which requires focus.

### **Goal 3: Children become involved learners and connect with their immediate environment**

Following need to be kept in view for assessment under this goal:

- **Mathematics forms the foundation for the expansion of essential aptitudes** in an individual and this is especially vital in today's rapidly progressing digital world. Mathematics can be introduced in the foundational years of education through exposure to solve puzzles, develop the concept of distances, weights and time, three- dimensional cognizance in forms of geometry and sizes and shapes.

- **Assessment of the child must essentially include the ability to make sense out** of numbers, prepare groups, shapes, patterns, understand direction, distances, weight, and time.

- **Learning numeracy is not limited to counting numbers, rather it entails learning the language of mathematics and use of mathematics by the child to relate to her/his environment.** It is not about following algorithms to arrive at a solution, but it is more of grouping and regrouping to perceive the things better.

An example of an assessment task that tries to analyse mathematical thinking capabilities in a child is given below. In this activity, instead of just asking children to count the stars and colour them, the child can be prompted to make groups of 2, 3 and 4 and colour them differently on different papers and observe how many groups of 2,3 and 4 are formed and to see the relationships between them. This activity of grouping and regrouping enhances the analytical ability of the child. Thus, it may be emphasised that learning numeracy is not just understanding of continuous mathematics and applying algorithms but also about discrete mathematics and using mathematics to make a sense of the world around us, i.e., mathematical thinking.

•Assessment should support the learning of mathematics and furnish useful information to both teachers and students.

***Some of the suggestions for undertaking assessments in foundational years have been shared below:***

• **Multiplicity of Assessment Tests and Techniques-** India is a diverse nation, so 'singular' test cannot be used to assess the numeric skills of all the students of a nation. So, multiple assessment tests need to be created according to the socio- cultural, economic, geographical, and linguistic demands of the areas. Further, the assessment techniques also need to be innovative and should try to explore the attainment of learning outcomes by the students in their classrooms. However, students must not feel the pressure of assessment. Hence, it should be undertaken as a joyful activity in class, preferably through collaboration or group work.

• **Development of Model Assessment Test based on Learning Outcomes-** The assessment tests should be subjective and according to the learning level of children of the classes. But this subjectivity should not malign the aim of attainment of foundational numeracy among the learners. So, the learning outcomes which have been developed by the NCERT should be in the prime focus while developing these assessment tests, so that parity can be maintained in the tests designed for two different classes.

• **Development of Question Bank-** The organizations like NCERT and SCERTs can also develop a pool of questions related to varied aspects of foundational numeracy for the students of different age group. The learning outcomes of each class should be considered while developing the questions for the question bank. These banks can be used as quizzes addressed to groups in class, or children can be asked to work in groups to devise quizzes for other groups.

• **Creation of Audio-Visual tools for Assessment-** Some audio-visual tests can also be developed to understand and assess the attainment of numeracy and mathematical skills among the learners. They may be appropriated by the different state governments as per their needs. These audio-visual tools can be created in different languages and in different states, so that these can be more appropriate for assessing the learning outcomes of students of different states which come from different socio-cultural, economic, and linguistic backgrounds.

- **Portfolios:** Portfolio is an anecdotal record of child's work during teaching-learning. A portfolio gives holistic idea about child's progress, learning strengths of the child and learning gaps vis-à-vis learning outcomes. A portfolio also provides necessary inputs to teacher of new class (if any) about child's progress and learning process in earlier classes. Portfolios need to be developed by the child in consultation with the teacher and can also be used for peer and self- assessment. Take care that portfolio should not only have record of good work done by the child, but it is record of all noteworthy activities including, assignments, worksheets, projects, record of observations in the classroom and oral interaction with child in the form of teacher's note etc.

- **Assessment through Rubrics**

Rubrics is an important tool for CCE and SBA. Rubrics should be developed by the respective class teacher with participation from students. They should be written in such way that it is easily understood by teachers, children, and parents. Some examples of rubrics for evaluating tasks for foundational numeracy are given below. These may include descriptive details of the work, which depend on the feasibility of users' available time, nature of task, etc. For example, if children will use them, then their abilities need to be taken care of while creating and using them.

Criteria	Level I	Level II	Level III
<b>Identification of shapes</b>	Identifies a given shape with the same/ similar shapes of the familiar objects (given /existing around) after some attempts	Identifies a given shape with the same/similar shapes of the familiar objects (given/existing around)	Identifies a given shape with the same/ similar shapes seen before but are not around
<b>Naming shapes and the features</b>	Able to generalise the features of a shape to name it informally after some attempts but not formally	Able to generalise the features of a shape to name it informally and formally	Able to generalise the features of a shape to name it informally and formally, and cites different examples
<b>Naming shapes and the features</b>	Able to draw but unable to name a given shape from Different Perspectives	Able to draw and name a given shape from different perspectives	Able to draw, name and explain a given shape from Different Perspectives
<b>Imagination/ Creativity</b>	Imitates others/takes clues and attempts to create figures /objects through drawing/art and craft	Creates figures/objects through drawing/art and Craft Independently	Gives novel ideas and creates innovative figures/objects through drawing/art and Craft

- Ability to interact with the immediate surroundings as well as to know and comprehend about the world at large constitutes a large part of child's development.
- Adequate opportunity must be provided to the children to explore the immediate physical environment, the residents, flora and fauna, people, places of importance and interest (their need, importance, and utility), the available facility including technology (their need and utility) in the foundational years. Children can learn about their family history by talking to their parents, and grandparents. They can be encouraged to take care of a plant or animal and to study their growth.
- The teacher must, through observation, interaction, and projects/tasks, assess the level of interest and engagement of a child in comprehending and understanding the world around him/her.
- Assessing through story telling is a useful way by which the teacher can facilitate the understanding of the world around them. In addition to asking open ended questions to children, they may be encouraged to frame and ask questions. Assessment rubric could be designed to understand the level and the range of questions being asked by the child.
- Children can also be encouraged to build stories around their toys based on their interaction with their surroundings and society

**Children's participation in class:**

- Make activities and learning tasks more participatory in nature keeping in view of varied needs of children.
- Encourage children to participate in classroom activities through asking questions and framing of problems.
- Allow freedom of mobility to children in class while working in groups and reading from reading corner.
- Encourage children to develop many informal strategies in dealing with problems related to numbers and measurement.
- Opportunity to respond, discuss and share readings and books.

**School-Based Assessment: Tools and Techniques (illustrative)***Use of Observation*

- a. An important part of understanding children's learning is to observe what engages them. 'Observation' is therefore, one of the important techniques of assessment during foundational learning.
- b. Opportunities need to be created wherein while playing the child can express their potentialities, because play-way method is the suggested pedagogy during the foundational learning. These play situations can be facilitated in the classroom and even at home. Observations may be done to note, 'With whom do they like to play?', 'How do they play?', 'How well do they communicate?', 'Which activities engage them?' etc.
- c. Interest is an excellent motivator for children. When children are engaged in an activity or experience that is absorbing, they are more likely to learn. Another pertinent question to ask is: 'In which situation do children learn best?' This will be different for different children. Each child will have a preferred way to explore their world; it might be in a group, along with few other children, in the presence of an adult; or on their own.
- d. Through observation teachers and care givers become aware of individual children's likings, which is a precursor for learning to happen.



### **Suggested Teacher Activity**

*Goal-‘Children maintain good health and well-being’*

The teacher will ask two children to hold the rope. The teacher will instruct to keep the rope half foot above the ground. Rest of the children will stand in a queue and will run and take high jump turn by turn. The children will perform accordingly.

### **Self-Assessment and Peer Assessment**

Assessment should not be limited to paper pencil assessment, particularly in the early years. Teachers need to use self and peer assessment for letting children to assess each other and themselves. This will encourage children to take greater responsibility for their learning, engaging with assessment criteria and reflection of their own performance and that of their peers. Through this, children can learn from their previous mistakes, identify their strengths and weaknesses, and learn to target their learning accordingly. The teacher may use innovative and play-based strategies to do self and peer assessment, such as, by using clay or wooden (eco-friendly) toys. In fact, toys can be used very creatively to assess the personal, social, and emotional development of the child. Teachers need to be incredibly careful with small children while using self and peer assessment not to make these burdensome for children. Exemplar Self and Peer Assessment is given below focusing on the LO-EVS 6.7:

**LO-EVS 6.7 Groups objects, birds, animals, features, activities according to differences/ similarities using different senses (e.g., appearance/ place of living/ food/movement/ likes-dislikes/ any other features) using different senses**

**Activity-** Children are given a task to group objects based on their shapes.

**Resources-** Triangular, rectangular, circular, and square shaped cardboard pieces and some objects and toys of these shapes such as ink pad, bangles, rings, etc.

### **Self- assessment sheet**

**Name**.....

**Tick mark the option, that you think is right for you-**

**(for small children, teachers may use emojis or smiley faces where children put a mark)**

1. I grouped the object, and I created new shapes using papers with the help of teacher/friends

2. I mostly grouped all those shapes and objects without any support; only for some objects, I asked for support.....
3. I could not understand how to group, so asked teacher.....
4. I took very little time to group the shapes and I helped others too.

**Peer- assessment sheet**

**Name of my friend.....**

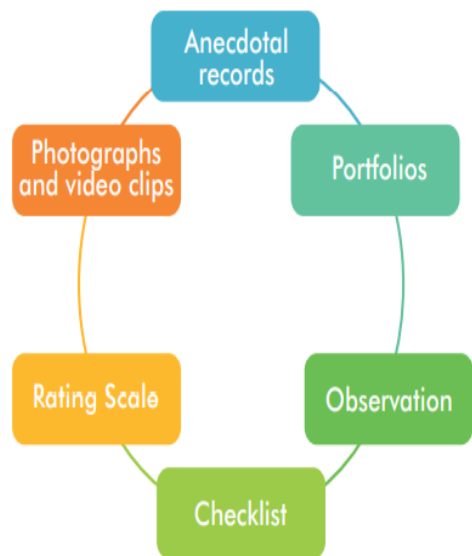
1. Completed the task without help Yes/No
2. Helped others in completing their tasks... Yes/No
3. Was asking for support to complete the task...Yes/No
4. Finding the task very difficult, so he/she was sitting silently...Yes/No.

**Use of Portfolios**

- The teachers and children can jointly maintain a portfolio for documenting the progress made by the child. Each portfolio represents a child’s journey in learning.

**• The portfolio may be developed as follows:**

- ✓ Decide the learning area(s) to be assessed every week/month (e.g., listening/speaking skill, bonding with books, print awareness, math concepts, problem solving, creativity, peer relationships).
- ✓ Develop a file folder (portfolio) with each child’s name and a logo/code.
- ✓ Keep adding/collecting the samples of children’s work with date and specific learning area (e.g., drawings, paintings, video/ audio tapes, photos, anecdotes).
- ✓ Relate the children’s work/activities to the three developmental goals.
- ✓ Ensure the work samples showcase the child’s efforts.
- ✓ Share the data and explain the clear picture of each child.



## **School Based Assessment Compiling Progress through Holistic Progress Report Card (HPC)**

- Assessment of children on all the essential aspects of their growth and development need to be compiled in the form of Holistic Progress Card. The evidence gathered through the activities designed need to culminate in an HPC, which is an individualized and comprehensive reporting of a student's progress. HPC builds on continuous assessment to present a picture of the student's progress across a specific time as opposed to a one-time assessment at the end of a term/semester or school year.

- **The following are some of the attributes of an HPC:**

- a) Provides disaggregated reporting, unlike a single score or letter grade in a subject area.
- b) Holistic progress reports many unique competencies which are not just academic.
- c) Multiple learning outcomes are defined (please see Annexure I) to indicate progress of the student in literacy, numeracy and in other areas such as psychomotor skills, environmental awareness, personal hygiene, etc. to enable identification of areas of strength and areas of improvement.
- d) Painting, drawing, clay-work, toy-making, projects and inquiry-based learning, student portfolios, quizzes, group work, role plays, etc., can be used to assess student progress since indicators/learning outcomes are more comprehensive.
- e) Informed conversations are held with the teacher, student, and parents for reporting.
- f) Parent, Peers, and self-assessment can be used to report 360-degree progress.

## **Large-scale Standardized Assessment in Foundational Learning**

- Large-scale assessment data at the National or the International level focuses on the 'System' and describes the educational health of the nation, state, or district. Since it involves comparison of the 'systems', the tools and techniques used need to be standardized. The assessment tools commonly used in conducting large scale assessment studies are Multiple Choice Questions (MCQ). The constructed responses are usually avoided to bring in objectivity in the process.
- Large-scale assessments are a mechanism to gauge how well learning is happening in their state, districts, and blocks. These large-scale assessment studies are carried out by defining the 'assessment framework' and with a clear purpose in mind regarding how the assessments study will be used to evaluate the system, to hold it accountable and to define strategies for improving the learning levels. Assessment design and administration are crucial to ensuring the

validity and reliability of data generated by such studies. These kinds of surveys are crucial to understand whether the inputs provided are facilitating the learning.

- In India, the National Achievement Survey conducted in 2017-18 described the learning levels of the children in grades 3, 5, 8 and 10. With the focus of NEP 2020 on foundational learning, NAS for foundational learning would be conducted in 2021 to understand the system level preparedness and functioning. Further, a study will be undertaken by NCERT which will be the first large scale assessment & benchmarking study for foundational literacy including oral reading fluency across different languages in India. It is envisioned to be positioned as a subsystem study under the main National Achievement Survey (NAS) 2021 to extrapolate and understand the learning levels vis-à-vis the advancement in the grades.

## **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. Before actual implementation of FLN, there should be appropriate exposure to literacy and numeracy rich environment for the children which encourage interactions to achieve the desired competencies or learning outcomes. However, the data collected through Large Scale Assessment is helpful for assessing the health of the system, i.e., teachers' capacity to implement FLN, parents' involvement, quality of material, etc. Coherence in both the types of assessment will facilitate implementation of FLN mission in smooth manner. Large Scale Assessment will help in reporting the progress on SDGs, but school-based assessment on the part of teachers will help in improving FLN learning outcomes leading towards holistic development of children.

### **Suggested Teacher Activity**

**Goal-'Children become involved learners and connect with their environment'**

The teacher will take the children to the garden and will familiarize them with different trees. Children become familiarized and develop relationship with nature.

### **Read the following case study:**

Sarah was 5 years old when her parents found that she was not quite keeping up with the class. She could not recite as well, was undisciplined (would not keep things in place in her KG class) and was irritated at the slightest loud sound. They were called in and the teacher explained that “she was behind” on many development milestones. Mother Shaila was most upset and as she reflected, she thought “I wasn’t that smart either and I turned out ok” but then again something seemed amiss, and she could not put her finger on it. Then they met Kulsum’s mother - Sabiya. She mentioned that Kulsum too had similar challenges, but they had gotten to know of this program that explained brain development stage and how what Sarah was experiencing could be easily understood using that model. It clearly spelt out how chronological age could be different from neurological age and there was nothing right or wrong about this. This all seemed so difficult till Sabiya shared a book with a simple diagram to check for milestones at different ages - in fact months. It covered how the brain took inputs (stimulus) and at the child’s volition there was output (via speech, movement or any other). It gave simple test such as seeing how much the child could run or what size of text the child could read. It also had a guide on what to do next. Acting on this mother Shaila committed herself to ensuring Sarah would get all the input - stimulation that was relevant for her stage and hand-crafted tens of stories written nice and big. All of these were read to Sarah while her vocabulary was systematically built using flash cards. Along with this Shaila realised a physical program was necessary with some creeping and crawling to build physical strength while helping “grow the brain”. A year later, Sarah could read at age, was bright eyed and could tolerate loud sounds (the latter thanks to a program that helped her auditory exclusion capabilities). Ever since Sarah has been a fan of the neuroscience of child brain development and why not!

### **Reflective Questions:**

*1. What was special about the teacher who identified the struggling Sarah? Do you have any such cases in your class? What would you do to help the child?*

*2. Sarah claims to be a fan of neurosciences in the conclusion of the case study. While she is finding it difficult to be a normal student in the class at the beginning of the story. How has the world changed for her? How will you as a teacher appreciate inclusion in your class?*

<https://forms.gle/piNTPWwJZHasHpdF6>

**(FLN Teachers are requested to submit their responses on the above google link.)**

## Resources and Useful Links

Draft National Education Policy, 2019

[https://www.education.gov.in/sites/upload\\_files/mhrd/files/Draft\\_NEP\\_2019\\_EN\\_Revised.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN_Revised.pdf)

National Education Policy -2020

[https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)

NIPUN Bharat guidelines

[https://www.education.gov.in/sites/upload\\_files/mhrd/files/nipun\\_bharat\\_eng1.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/nipun_bharat_eng1.pdf)

SDG document

<https://www.un.org/development/desa/disabilities/envision2030.html>

NCF 2005 document

<https://ncert.nic.in/pdf/nc-framework/nf2005-english.pdf>

Vidya Pravesh document

<https://ncert.nic.in/pdf/vidyapravesh.pdf>

## Pledge:

Let us join hands to ensure a conducive learning environment  
Enabling all children to achieve foundational skills.

We pledge to make the school a place of joyful and experiential  
Learning where children can use their language freely, ask  
Questions freely, play freely, and where every child is respected.

Let us make the school as well as the home, a place for  
developing lifelong skills for reading with comprehension, writing  
With purpose and understanding numeracy, in every child that  
They can apply in their everyday life situations.

Let us strive to make education meaningful and joyful for each  
Child of our country and make every child NIPUN.

A PRACTICAL  
HANDBOOK FOR  
FLN TEACHERS

State Council Of  
Educational  
Research and  
Training,  
SCERT- KD

