

# THE PRIMARY YEARS

Towards a Curriculum Framework

Part II



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Part II*



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***“The object of teaching is to bring more and more out  
Rather than to put more and more in”***

**—FROEBEL**

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*Towards a Curriculum Framework*  
Part II

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## Foreword

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**T**HE National Curriculum Framework for Elementary and Secondary Education was brought out by the National Council of Educational Research and Training (NCERT) in 1988 following the National Policy on Education (NPE) 1986 on the basis of an extensive participatory exercise at both national and regional levels. This framework covered the stages from pre-primary to secondary and has been the reference point essentially for all subsequent activities in the last decade in the area of curriculum development.

The last decade has, however, also witnessed some significant developments which have had a bearing on the school curriculum and have necessitated a review again of the curriculum framework. In 1992, the Committee set up by the Ministry of Human Resource Development (MHRD) to investigate the phenomenon of curriculum burden came out with its report *Learning without Burden* which, in a modified form, was accepted for implementation at the state level by the Central Advisory Board of Education (CABE). The report raised the issues of relevance and load and strongly recommended review of syllabi and textbooks from these points of view. In 1990, the Minimum Levels of Learning (MLLs) were brought out by the Ministry of Human Resource Development for the primary stage of education. The emphasis in this approach has been on ensuring certain minimum academic standards and attainment levels across the country. Recent achievement surveys conducted by the NCERT and state agencies do not, however, present a very optimistic picture in this regard indicating among other aspects, the need to relook at the given MLL paradigm. At the primary stage while Operation Blackboard was launched with a focus on improving the learning conditions in the primary schools, multigrade teaching continues to be a reality which is likely to persist for a long time to come. The existing curriculum framework does not address this aspect at all.

On the global plane too, the situation in the last ten years has changed dramatically. With the rapid advancements in the area of communication technology, the growing urbanization and various socio-political developments, an imperative need is evident for the curriculum framework to be reviewed and updated to reflect the present-day concerns and priorities so as to gear itself to prepare the child for the demands of the coming decades.

It is in this context that the NCERT has initiated the exercise of reviewing the framework starting from the very lowest rung of the education ladder,

i.e. the Early Childhood and Primary stage. This stage which serves as the foundation for not only further stages of education but also as the foundation for life, has its own character and flavour since it tends to derive its focus more from the developmental status and personality of the child than from the dictates of the various subject domains. It is in this respect, it is very distinct from the other stages of education which tend to be more dominated by the various subject disciplines.

*The Primary Years*, which is being brought out in two parts is the outcome of this review exercise. It presents the consolidated views that have emerged on the directions in which the framework for the primary stage needs to be recast and which are based on the intensive deliberations and interaction with many teachers, teacher educators, and representatives from Non-Governmental Organizations (NGOs) and experts with long years of experience in primary education. It has been prepared essentially as a discussion document with the hope that it will stimulate the much-needed debate and deliberation with respect to the primary curriculum not only in terms of content and pedagogy but also with respect to the essential conditions required to make this child-centred curriculum a reality on ground. This could then form a part of the final revised curriculum framework. It is, therefore, slated to be shared in a National Conference to facilitate and expedite the process of dialogue and discussion.

I am grateful to all the members of the core committee whose invaluable advice helped in giving shape to this entire exercise. I also appreciate the wealth of ideas that came our way through our interactions with the large number of teachers from some of the states prior to the development of the document.

The preparation of both the parts of the document *The Primary Years* within a short span of ten months was possible only because of the commendable diligence and enthusiasm displayed by all my colleagues in the Department of Pre-School and Elementary Education (DPSEE) for which I am very obliged to them. I am also grateful to my colleagues from the Department of Education in Social Sciences and Humanities, the Department of Measurement and Evaluation and the four Regional Institutes of Education (RIEs) for extending support when required.

I now look forward to receiving valuable feedback on *The Primary Years* not only from curriculum framers but from all sections of society who have a stake in primary education and are keenly interested in ensuring that our children get the kind of quality education they so well deserve.

A.K. SHARMA  
Director  
National Council of Educational  
Research and Training

New Delhi  
20 June 1999

## Preface

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**T**HE National Curriculum Framework was revised in 1988 keeping in view the resolutions of the National Policy on Education (NPE) 1986. Along with other issues the NPE had also addressed the issue of disparities in the standards of attainment of children and recommended identification of the Minimum Levels of Learning (MLLs) for each stage of school education. In 1991 the Ministry of Human Resource Development (MHRD) brought out a document *Minimum Levels of Learning at Primary Stage*, which has since become the guiding force for all subsequent curriculum-related activities at the primary level. The feedback received on the implementation of the MLL programme brought to light some critical concerns related to both the concept and its pedagogical implications. These concerns called for immediate review of the situation.

A seminar was organized by the National Council of Educational Research and Training (NCERT) in December 1996 on 'Reviewing Priorities in Primary Level Curriculum' at the Indian Institute of Education, Pune in which representatives of both Government and non-Government organizations participated along with some international agencies. After intensive deliberations the consensus arrived at was that there is a need for the NCERT to immediately take a relook at the curriculum framework for the primary stage in the light of the emerging concerns. The NCERT was advised to bring out a document proposing a revised curriculum framework which should also place the MLLs in the right perspective.

As a prelude to the preparation of this document, the NCERT constituted a Core Committee of professional experts in the area to guide the exercise of revision. The NCERT also conducted a series of interactions with primary school teachers from some of the states to elicit their views and understand the needs of the situation in the field.

The process that followed in developing this document has been a very stimulating and enriching experience for each one of the faculty members of the Department of Pre-School and Elementary Education (DPSEE). It involved six months of discussions and debates among the faculty members and has, therefore, seen several stages of drafting and redrafting of the manuscript. In a nutshell, we have actually lived through the document during the past six months.



I would like to take this opportunity to convey my gratitude to Professor A.K. Sharma, Director and Professor A.N. Maheshwari, Joint Director, NCERT for their consistent guidance and support at every step in this effort. My thanks are also due to members of the Core Committee for their academic support in this venture.

I would like to place on record my sincere appreciation of the valuable contribution made by all our colleagues from within the department, as well as from other departments of the Council and from the four Regional Institutes of Education in giving final shape to this document.

I would be failing in my duty if I do not acknowledge with gratitude the invaluable support provided by Dr Daljit Gupta who efficiently coordinated the entire exercise at all stages of the development of this document right from the inception to bringing it out in the present form.

My grateful thanks are due to Ms Hema Tiku and Ms Krushna Panda for providing assistance in production and Shri Shakambar Dutt, Smt Pushpa Venkatesh, Smt Suresh Azad, Shri Vinod Kumar, Smt Meenakshi and Shri Ashok Kumar for bringing out the computer output of this document. But for their unstinted support it would not have been possible to make this document a reality.

VENITA KAUL  
*Professor and Head*  
Department of Pre-School and  
Elementary Education

New Delhi  
29 October 1998

## Part II at a Glance

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LET US recall the opening words in Part I of the document, "If I cannot learn the way you teach me can you not teach me the way I can learn?". But how do we make the child's plea a reality?

In Part I we talked about the need for a child-friendly environment in the classroom where the content, materials, teaching-learning strategies, assessment techniques are all designed with the 'child' as the focus and not the 'teacher' or the 'subject' (discipline) as the main consideration.

Part II talks about how to actually bring this approach into the primary classroom so that all the children can learn. It comprises six chapters.

**Chapter 1** provides glimpses of Part I of the document and a brief outline of the considerations/recommendations for framing the curriculum at the state level.

**Chapter 2** provides the rationale for conceiving the area of Environmental Education which integrates for the first time EVS I and II, Health and Physical Education, Simple Yoga Education, Work Experience, Value Education and Technology. It defines the Expected Learning Outcomes, attainment of which can be facilitated through the identified key learning areas. In view of the area being new, an attempt has been made to list out suggested indicators which though not exhaustive would be helpful to teachers, authors of instructional materials and curriculum developers.

**Chapter 3** addresses the language curriculum in a comprehensive way. It includes not only teaching of mother tongue but also addresses the situations where children have to learn a school language which is different from their home language. Responding to the current demands across the country it also includes issues related to teaching of English at the primary stage.

**Chapter 4** provides the aims and objectives for mathematics teaching-learning at the primary stage. This is followed by the concerns regarding the teaching-learning of the subject as it exists today. Keeping these concerns in mind a new vision is reflected through the proposed learning areas, expected learning outcomes, suggested teaching-learning methods and materials and assessment techniques. Finally, how the subject can be integrated with other curricular areas is also suggested.

**Chapter 5** provides the objectives of Arts Education, the concerns related to the subject, some sample activities for the guidance of those planning art activities for children and for the first time looking at integration within the arts as well as arts with other curricular areas. Children's interests and capabilities have been kept in mind.

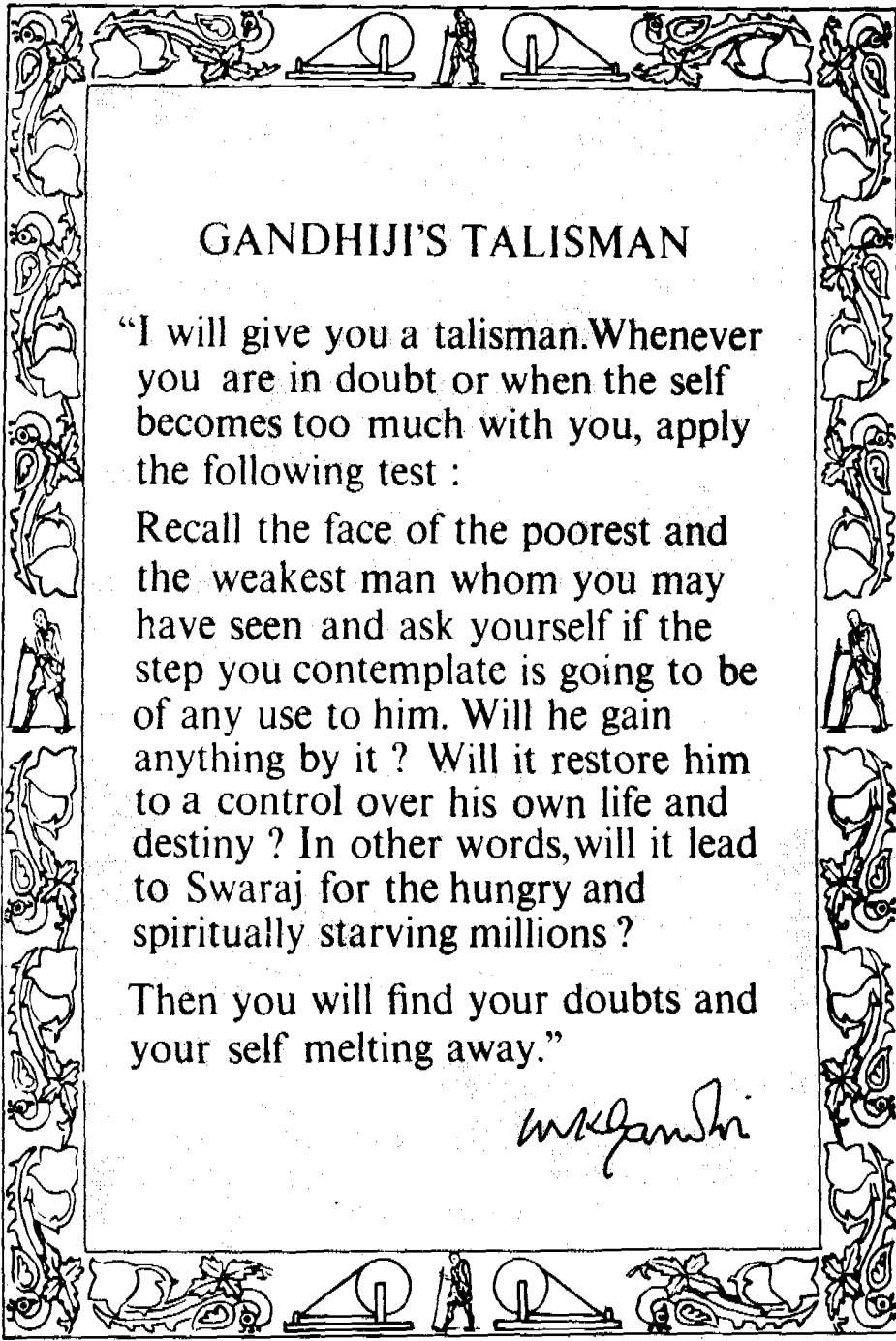
**Chapter 6** provides an insight into the multi-level approach to teaching-learning. This approach suggests use of a variety of materials, teaching-learning strategies, assessment of the child be it monograde or multigrade situations. An integrated approach to teaching has also been briefly discussed to help the teacher and children to reduce the curriculum load and make teaching and learning more meaningful.

**Epilogue** marks the conclusion to the document *The Primary Years* that no exercise in curriculum development can be final or complete in itself, the process must go on.

## **This Document Contains**

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## GANDHIJI'S TALISMAN

“I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test :

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it ? Will it restore him to a control over his own life and destiny ? In other words, will it lead to Swaraj for the hungry and spiritually starving millions ?

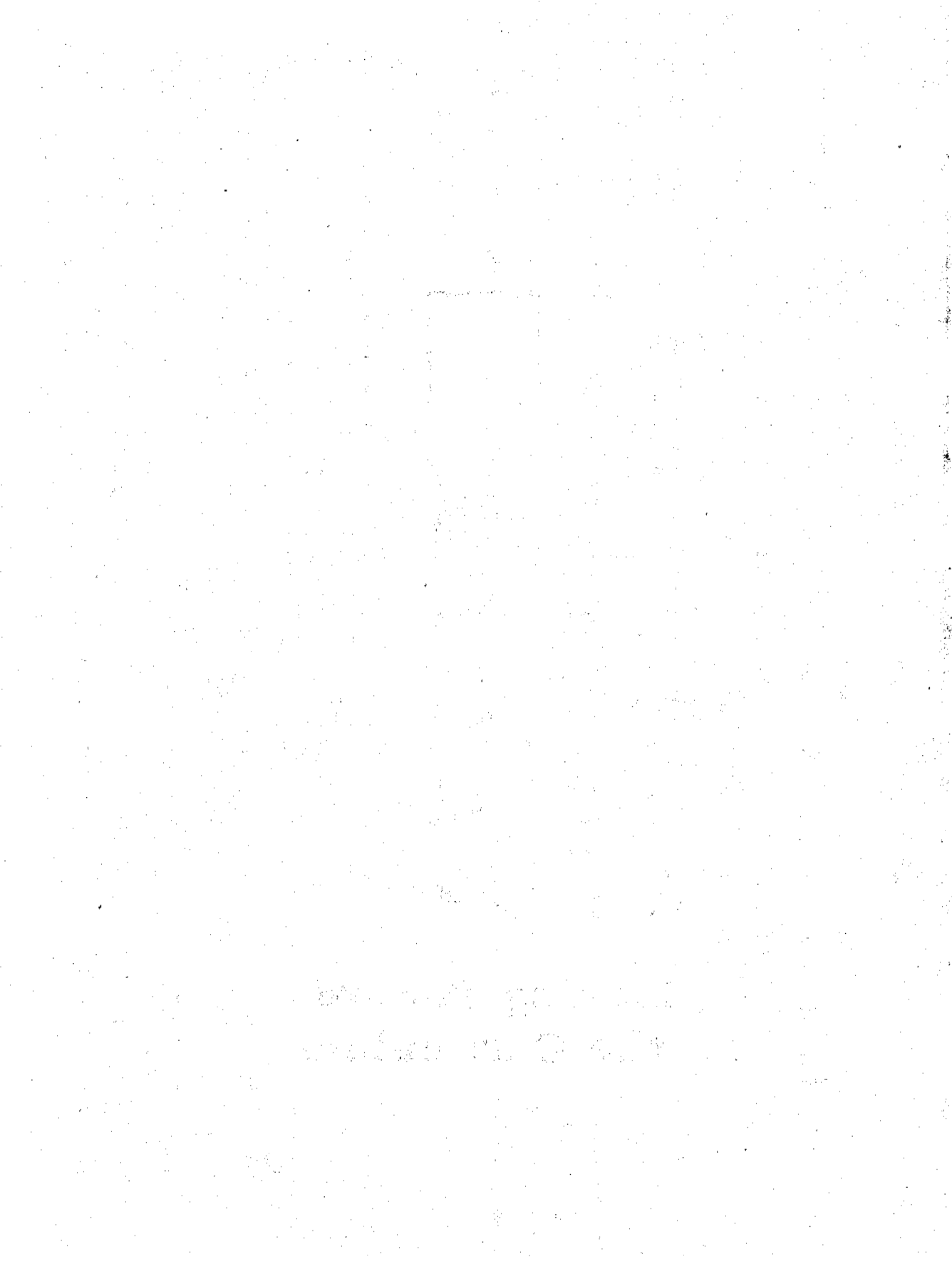
Then you will find your doubts and your self melting away.”

*M.K. Gandhi*

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## **Moving Towards the Curriculum**



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**I**N PRIMARY YEARS Part II an attempt has been made to translate the major thrusts of the proposed curriculum framework, as given in Part I, into more specific guidelines for detailed curriculum development.

In this chapter we will recall, for the sake of easy reference, some of the main features of the proposed framework as given in Part I. We will particularly focus on those features which have guided the detailing of the different curricular areas. In this context therefore, we will discuss the following:

- The Conceptual Framework
- The Major Changes Proposed
- Shift from MLL to ELO
- The Four Curricular Areas
- From Framework to Curriculum

### **The Conceptual Framework**

The conceptual basis of this framework can be best described in terms of the main considerations that have guided the revision of this curricu-

lar framework. These are mainly

⇒ **the vision that we have for the 'child'** by the time she/he completes primary education, in terms of knowledge, skills, attitudes and values. This vision, as discussed in detail in Chapter 3 of Part I, is based on

- \* *the thinking of our great Indian philosophers and educationists who saw the role of education as aiming towards development of the total personality of the child, both as a productive and humane individual. It also takes into account the current thinking reflected in a recent Unesco report which is in tune with the Indian thought and which identifies the objectives of education as the four pillars of learning — learning to know, learning to do, learning to live together and learning to be.*
- \* *the demands on the child from the present and the challenges in the future, keeping in mind the rapid technological, social and cultural changes that are taking place, both globally and nationally.*



⇒ **The existing curricular concerns** detailed in Chapter I of Part I of the document, particularly the need to

- \* ensure readiness to learn in children by viewing primary stage as a continuation of ECCE
- \* place MLL's in correct perspective keeping in mind multi-level classroom situations
- \* tackle the issue of information load
- \* provide holistic and developmentally appropriate learning
- \* make learning relevant and interesting for children
- \* facilitate learning in the prescribed medium of instruction keeping in mind the varied language contexts in the country
- \* refocus on value education
- \* address field realities like multi-grade schools and large classes
- \* relate school to the community
- \* address the needs of the girl child
- \* address needs of children who are differently abled

⇒ **Understanding of how children learn** which is largely based on the globally accepted social constructivist viewpoint. This points to the need to adopt a child-centred approach to teaching-learning, keeping in mind the Indian situation as described in Chapter 2 of Part I of this document. Some of the major assump-

tions guiding this thinking are:

- \* children do not naturally absorb but rather construct their own knowledge through experiences that interest them.
- \* children come to school with an already collected fund of knowledge, skills and attitudes on which all new learning should be built and it should be related to their immediate context.
- \* children's capacity to learn can be enhanced if they are given opportunities to interact with the teacher or more able peers in the classroom through discussion and sharing of experiences.
- \* every child can learn provided she/he is allowed to progress at her/his own pace and follow her/his own style of learning, as each child is differently intelligent, abled, and interested.
- \* the social context in which the child is placed determines to a large extent how and in what way the child will learn.
- \* children in this age are at a developmental stage when they can understand and learn better through concrete experiences and examples involving active learning and thinking.
- \* children's learning is more spiral than linear and therefore, children need to handle concepts again and again at varying levels of

*complexity before understanding them fully.*

- \* *children need to be helped to learn to handle their emotions and to adjust and adapt to different situations in a positive manner.*

### **The Major Changes Proposed**

While some aspects of the previous National Curricular Framework (1988) continue to be very important and have been retained, some changes have been suggested in view of what has been discussed above. These major changes include:

#### **1. Reorganization of the Curricular**

**Areas** for primary stage by merging the existing six areas into four areas with the aim of

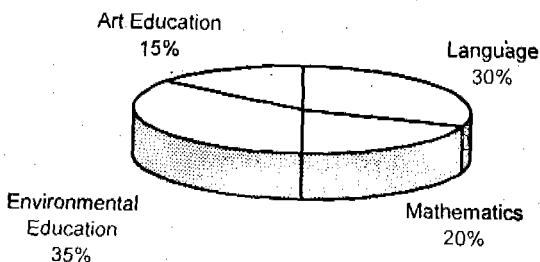
- \* *providing more holistic learning to the child*
- \* *bringing the important areas of work experience, physical education, health and value education which are otherwise neglected, more into the centre stage of the curriculum by including them in the area of Environmental Education*
- \* *emphasizing the importance of Arts Education for the all round development of the child*
- \* *reducing curriculum information load for the child and the teacher by minimizing repetition and overlap.*

The proposed areas are :

- \* *Environmental Education* to include EVS I and II, Work Experience, Health and Physical Education, Yoga Education, Value Education and Technology. While **Physical Education** has been included in this area because of its significance for the child's well being, its importance and the need to give adequate time for it in the daily class schedule has been particularly stressed.
- \* *Language*
- \* *Mathematics*
- \* *Arts Education, for which the time allocation has been increased.*

Emphasis has also been placed on **interlinking and integration** of areas, as far as possible, in the course of curriculum transaction.

The **teaching-learning** time distribution for each area is proposed as follows :



## 2. Level-wise planning and implementation of the curriculum

With a view to provide for individual pace and style of learning, the curriculum framing is proposed at *three levels* across the five grades and not for each grade separately. The three proposed levels are:

*Level I* : Corresponds to / includes Grades I and II of the primary stage and is seen as a continuation of pre-school. This period is expected to focus on initiating children into basic habits, concepts and skills.

*Level II* : Corresponds to Grades III and IV of the primary stage. This level is seen as a period for reinforcement/further strengthening and extension of learning.

*Level III* : Corresponds to Grade V of the primary stage. This year is seen as a year that provides for consolidation of previous learning and readiness for the upper primary stage.

## 3. Linking of ECCE with primary

Emphasis has been placed on the need to see primary education in continuity with ECCE in terms of the curriculum. In this context, the importance of ensuring physical, cognitive and social readiness in children for formal learning of the 3 R's has been highlighted. For children who come directly to grade I without a good ECCE base, a school readiness programme at the beginning of grade I is proposed.

## 4. Addressing the problem of teaching of language which is the medium of instruction in situations where the child's home language is different from the school language

This aspect has been specially addressed in this framework. While the **mother tongue or regional language has been emphasized as the medium of instruction for the primary stage**, the need has been acknowledged to look at the above situation differently. The suggested approach for mother tongue teaching rests on the assumption that children already come to school with some language competence and skills. This assumption does not hold good in the above situation since the child has her/his first exposure to the language of instruction only after coming to school. An *alternative approach* to language teaching which will help the child make the transition smoothly from home language to school language has therefore been suggested. In response to the emerging trend of introducing *English* at the primary stage, this aspect has also been addressed.

## 5. Reinterpreting MLLs as Expected Learning Outcomes (ELOs)

In this framework as indicated in Part I also, the Minimum Levels of Learning (MLLs) have been considered

merely as indicators for monitoring progress in children's learning which is also an indicator of school effectiveness.

However, in view of the concerns expressed in Chapter 1 of Part I of *The Primary Years*, we have termed these not as MLL but as Expected Learning Outcomes and interpreted them differently for the purpose of implementation for the following specific reasons :

- *Due to wide disparities in learning conditions in the country it is very difficult to identify the 'minimum' which can be mastered by all. Also, if we reduce the level of the curriculum for this purpose it may dilute the quality of educational standards further and only serve to widen the existing social inequities. The disparities in academic standards across the country mainly arise from variations in the quality of learning conditions that are available to children. The effort therefore should be not to lower the academic standards to suit these learning conditions but to improve the learning conditions themselves.*
- The concept of MLL, as previously interpreted, is derived from a behaviouristic framework. It does not conform to the proposed Child centred approach which is focussed on differences in individual pace and style of learning and aims towards the development of all round development of the personality of the child. The learning outcomes thus expected from the child-centred approach cannot, therefore, be necessarily measured in quantitative terms.
- The MLLs as given, were limited to measurable outcomes. Since the aims of education as derived from the four pillars of learning in the proposed framework include cognitive, psychomotor and affective domains, the scope of learning outcomes also needs to be broadened.
- While the emphasis in the previous interpretation of MLLs for improving the quality of learning is justified, it is neither desirable nor reasonable to fix quantitative targets for mastery level since :
  - all outcomes, particularly the ones relating to the affective domain do not lend themselves to the concept of 'mastery'
  - fixing quantitative targets is likely to make the curriculum more 'assessment centred' and thus narrow in scope
  - it will limit the expected outcomes to only the measurable ones.

## **The Proposed Curricular Areas**

### **Environmental Education**

In the proposed framework, Environmental Education has been conceptualised in a broader, child-centred

perspective to ensure more holistic and meaningful learning to the child and reduce information load. The four areas identified in the existing framework as Health and Physical Education (including Yoga), Work Experience, Environmental Studies I and II along with the areas of Value Education and Technology have been integrated into one curricular area, **keeping the child as the central focus**. The content of these curricular areas has been prioritised and integrated using the criteria of relevance of the content to a child's life, particularly in the context of the aims of primary education.

### Language

Language has been considered as basic to the entire curriculum since it is an integral part of all curricular areas. **The mother tongue or regional language has been recommended as the medium of instruction at the primary stage.**

However, in view of the wide diversities seen in our country, it is an accepted fact that a very large number of children do not get an opportunity to study in their mother tongue at all since their home language is often quite different from the school language. Also, with the rising demand for English to be introduced at the primary stage from the community, many State governments

are considering introducing it at the early primary stage.

The proposed framework for Language Curriculum therefore takes all these situations into account. It has been developed in *three parts*. **The Teaching of mother tongue** forms the main core of the chapter since it contains the details of the objectives, content outline, guidelines for teaching-learning processes and assessment in teaching a language. In addition to this the other two parts relate to:

**Teaching of language when home language is different from the school language:** For this situation an alternative approach is suggested, particularly at the initial stage, which will help children not only strengthen their own home language but also make a smoother transition, in terms of medium of instruction, from the home language to the school language.

**Teaching of English** which is recommended to be introduced if necessary, not before Level II as a new language but not as the medium of instruction at the primary stage. It is emphasized that it should be introduced only if necessary facilities are available in the school for teaching it.

In terms of objectives of language learning, the proposed framework emphasizes the development of all the four skills of listening, speaking,

reading and writing. It also lays emphasis on helping children develop **thinking skills** through the language curriculum. It also stresses the need for any language teaching to focus on the *three C's* — **comprehension, creative use of language and confidence** in using language in different situations in daily life.

### Mathematics

In mathematics, there is a renewed emphasis on development of understanding of concepts and problem solving abilities in children and not merely on development of algorithmic skills. The proposed framework, in this context, stresses the need to enable children to not only enjoy mathematics but also relate mathematics learning to daily life situations.

### Arts Education

Arts Education has been given an additional 5 per cent of time allocation in the proposed framework thus making it 15 per cent of the total interaction time. The need to integrate it where possible with other areas has also been emphasized with the objective of getting it a more central place in the curriculum. Stress has been laid also on providing the child opportunity for art experiences through integration of different art forms rather than through each art form in isolation. As in the previous framework, this framework also

stresses the need to provide the child with an environment which is conducive for encouragement of expression and creativity. While also developing in him/her a sense of aesthetic appreciation. Arts is also seen as providing the child an avenue for emotional release.

### Teaching-learning Process

Keeping in view the vision for the child at the end of primary stage, a multi-level and child-centred approach to teaching-learning has been suggested in tune with the social constructivist theoretical framework. Emphasis has been placed on planning activities and tasks to match the developmental status and characteristics of children's learning while also bringing in flexibility to cater to individual pace and style of learning. Although the framework recommends activity based teaching-learning it also points to the need to maintain a blend of old and new methods since different methods *fit better for different purposes*. Criteria for selection of teaching-learning strategy suggested include :

- *objectives to be achieved*
- *nature of curricular content*
- *learner's capabilities*
- *availability of time and resources*
- *organizational climate*
- *teacher preparation*

Suggested teaching-learning strategies include projects, surveys, demonstrations, educational games, role play, problem-solving activities, brain teasers, creative writing, quiz, songs and story telling, group/paired discussions, experimentation, inductive-deductive teaching, meta learning activities with concrete material, etc.

A child-centred classroom is described in the framework as one which should :

- *be democratic in climate so that children can share ideas and experiences freely with each other and with the teacher*
- *provide children active learning experiences and not just an activity for activity's sake*
- *reflect planning of programme and its monitoring jointly by teacher and children*
- *provide opportunities to children for discussion and reflection in groups and with the teacher with respect to different learning areas as part of the learning process*
- *be flexible to provide for a multi-level approach.*

### **Assessment**

*The emphasis on making assessment continuous and comprehensive and consider it to be an integral part of the teaching-learning process has been retained from the existing curricular*

*framework. Assessment is seen as a means of improving the teaching-learning process by identifying every child's strengths and weaknesses and building on the strengths to help with the weaknesses. In view of the fact that children can be differently intelligent, assessment has been recommended to go beyond paper pencil tests to include oral assessment, performance based assessment, observation, anecdotal records etc. Self-assessment by children has also been emphasized. Importance of making assessment diagnostic and providing teachers with diagnostic test items to make their task easier has also been suggested.*

### **Teaching-learning Time**

The proposed curricular framework is based on the assumption that after deducting number of days required for school functions, formal examinations if any, etc. **in a year there should be at least 200 days available for effective teacher-taught interaction** in the class. This has been suggested despite the fact that it is a known phenomenon that a large number of classes in the country do not get to function for even 150 days in a year, for various reasons identified in Chapter 8 of Part I of this document.

As mentioned in the context of the MLLs, the expected learning outcomes provide broad guidelines or indicators for framing and

transacting the curriculum. But the attainment of these outcomes is largely dependent upon the **learning conditions available** to children, of which a very critical condition is the time they get to spend with the teacher in any meaningful interaction. *All possible efforts should therefore be made to ensure that the stipulated number of working days are available to every school, through better educational management.*

A primary school should normally function for at least five hours a day, five days in a week. For facilitating better planning and preparation on the part of the teacher for an effective child-centred, activity based programme one day in the week, preferably Saturday, may be considered as a working day for teachers only. The teachers can be encouraged and facilitated to utilize this time for individual/joint planning, sharing experiences and preparation of material.

The duration of a class period in the case of schools with more than one teacher per class, should be shorter for Level I grades and longer for Level II and III grades since younger children have a shorter attention span. The teacher should have flexibility and autonomy to organize the class time in a way he/she considers most appropriate within the broad structure of a well balanced programme.

A daily plan should therefore reflect a balance of

- *activities for different curricular areas in proportion to the ratio of time prescribed for each area*
- *outdoor and indoor activities*
- *guided and open-ended activities*
- *whole class, small group, paired and individual activities*
- *activities for new learning, revisiting previously introduced concepts and continuous assessment.*

### **Teaching-learning Material**

Since a multi-level approach is being recommended for classroom practice, the framework suggests that teaching-learning materials should also be **graded and in modular form** to provide for individual pace in learning. Each module should have a built-in component **of assessment at the key transitional points.**

Instead of uniform textbooks for each grade, **workbooks** are recommended for Levels I and II and **textbook-cum-workbook** for level III since by then *more of self-learning becomes feasible on the part of children.* Language Readers are however suggested for all grades to provide interesting text to children for learning to read. A separate **teacher's handbook** is suggested to meet teacher's requirement of subject content and activities for guiding their teaching. **A kit of teacher-made**



**teaching-learning material** is also recommended to facilitate conducting of activities with children.

### **From Framework to Curriculum**

While this framework provides broad guidelines and expected learning outcomes for each curricular area, the detailed curriculum will need to be developed in a decentralised way at the state or district levels. This is necessary since our country is characterised by wide diversities in terms of language, culture, customs, flora and fauna and any one curriculum, content or material cannot be suited to all children in the country. It is being increasingly realised now that learning, in order to be effective, must relate to children's context and their previous experiences. It, therefore, becomes important to take the exercise of curriculum development to as decentralised a level as possible to be able to make it relevant.

While developing the curriculum, however, there is need to keep in mind that

- the curriculum must cater to all round development of the child, as reflected in the four pillars of learning and cater also to the national core components discussed in Chapter 4 of Part I of the document.
- the expected levels of learning have been identified for guidance

of those planning and implementing the school curriculum. These have been provided with the understanding that, **while each school must aim to help children attain at least these learning outcomes, there is no limit to what schools can offer depending on their own facilities and situations.** However, it is important to remember in this context that

- ⇒ *schools should include only as much content as children can learn well without feeling burdened, or else, the learning is likely to be superficial and meaningless. It has been observed that too much pressure can lead to a situation where many children may pick up the required skills but in the process of learning these, they may lose the motivation to use the skills!*
- ⇒ *merely including more and more of content in the curriculum **does not thus indicate higher standards** as is often mistakenly believed. The emphasis in teaching has to be on improving **quality of learning** by every child, not on completion of syllabus. Therefore efforts should be made by each school to ensure that the outcomes identified for each level are attained by most children so that learning gaps are not created/widened*
- ⇒ *everything need not be taught through the school curriculum only, since children learn a great deal*

outside school from other sources also

⇒ flexibility must be provided to allow children to learn according to their own pace and style of learning

⇒ while classroom assessment must take into account the holistic perspective, as indicated above, any macro level assessment at state, district or block level can be planned on the basis of those outcomes that lend themselves to some quantitative assessment techniques.

- The learning content identified must be from the children's **immediate context** and relevant to their daily lives, as far as possible for example, the child's own village/town/city, its history, landmarks, local arts, music, architecture etc. Also, any activities suggested must be such as can be feasibly conducted in typical school/classroom situations in the area.
- Care must be taken to ensure that the curriculum is **gender sensitive**. It should not in any way promote some common gender stereotypes which are at present a part of our culture and which are biased against girls (for example: girls should work at home while boys can go out and play). The curriculum must ensure creation of positive attitudes of equality and need to provide

equal opportunity to both sexes. Some common instances of bias are seen in textbooks wherein the illustrations show more boys in active roles as compared to girls, or examples and exercises given with the lessons which are more from the point of view of boys than girls. Similarly, the content of the curriculum or the language tone should not reflect any kind of bias towards **different religions, castes or communities**.

- The curriculum must also suggest adaptations needed for **children with special needs**, particularly in integrated settings. These adaptations can be in terms of specific readiness experiences related to a child's disability, materials, instructional strategies and mode of assessment etc. Some guidelines for these are provided in Chapter 5. It is desirable to involve **active participation of primary teachers** along with subject experts in the process of development of the curriculum and materials since they are most knowledgeable about the interests, abilities and learning styles of children whom they teach. Their involvement is likely to make the curriculum more developmentally appropriate and relevant for children.

Any curriculum that is developed must be **trialled or tried out first** on a sample of schools which are

representative of the possible diversities in the region for which the curriculum has been developed. It is desirable to do the trialling over a period of one full academic year so that the curriculum gets tried out in totality and not in parts. The trialling must **address all aspects of implementation of the curriculum** including training of teachers, possible ways of providing on-site support, monitoring systems and strategies and ways of procuring and utilising the feedback.

#### **Implementing the Curriculum:**

Keeping in view the diversities in the country in terms of learning conditions available to children, it would be desirable to encourage every school to set its own attainment targets in both short and long-term perspective, within the broad framework of the identified ELOs and prepare and implement **school development plans** to attain these. For this purpose it would be necessary to provide some training and support to the head teachers or heads of schools along with some amount of autonomy to facilitate them in finding their own ways and solutions.

Where **Head teachers** are not in position, this exercise could be undertaken on a wider base by the **Block Education Officer**, for the whole block. This exercise could be facilitated by categorizing schools in the block in terms of performance vis-a-vis facilities, and providing inputs on a selective basis in proportion to the needs of the schools. A **holistic plan** would be desirable which addresses all components of the teaching-learning process including teacher preparation, physical infrastructure, material resources, classroom practices and assessment approach, teacher empowerment and accountability and parent and community involvement, using a local-specific, **whole school approach/whole block approach**.

Instead of introducing large uniform schemes across the country for quality improvement, the solution thus is likely to rest more in bringing in more autonomy along with more accountability at the sub-state levels including at the level of the community, which in turn is likely to prove more effective in improving the quality of primary education in the country.

2



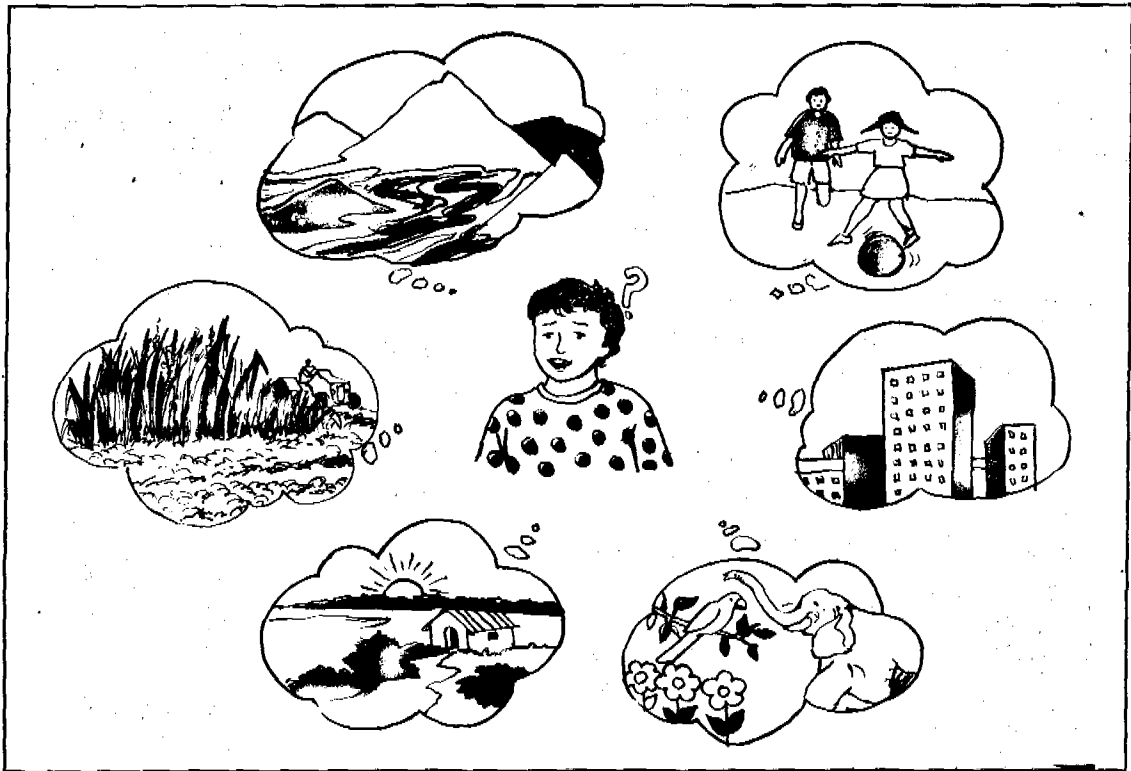
# Environmental Education



## What is the Environment?

**I**S IT THE AIR, the mountains, the sea, the desert, the vast plains around us? Is it the fields, the factories, the buildings and the monuments? Is it the people around us and the way they live, behave and think?

*It is all these and much more.* All of us including children are a very significant part of the environment, which though holistic in nature, is commonly seen in compartments as social, cultural, physical, natural and man-made.



To enable a growing child to be an effective part of the environment and ensure a life of quality for herself/himself and others in the community, it is necessary for the child to grow up as a healthy, well adjusted, well informed, and skilled individual. She/he should have a lasting sense of curiosity and desire to learn and grow. She/he should be an individual who must become not only competent and knowledgeable but also a good human being. In today's context particularly, with the continuous explosion of knowledge and information invading the life of every child, though in different degrees, it has also become very essential for the child to be able to develop skills of learning to learn. The child should develop the ability to receive and process information, distinguish fact from opinion, think logically, analyse facts and events, express opinions and make decisions or choices.

To ensure the achievement of the identified aims, it is necessary for the child to be given opportunities, constant encouragement and motivation to closely observe and know about the environment as a whole in terms of its features and characteristics and not as the social, physical and natural environment in isolation. This knowledge is necessary as the child is growing in that environment and has also to live and work in that as an adult. It is also necessary for the child to know that there is continu-

ous interaction between the different aspects of the environment and understand how this interaction leads to changes in all aspects including human life.

The child must also become aware that some of the natural resources are limited and should be shared and conserved, and, therefore, there is a need to consider the needs and rights of others in addition to being aware of her/his own rights and responsibilities.

To function effectively within the environment the child must also be familiar with the world of work and develop skills to be self-sufficient and efficient in day-to-day situations.

And how does the child learn all this and so much more about one's self, one's family, community and the world around? The child learns through

- observing/understanding the environment
- interacting with the environment
- caring for the environment

**And this is what Environmental Education is all about**

### ***Environmental Studies to Environmental Education — Why this Change?***

To understand the difference between the two, let us

⇒ examine the major concerns of



the existing curriculum in general and in the Environmental Studies curriculum in particular

⇒ consider the learning priorities today in view of the fast changing world.

### **Major Concerns of the Existing Curriculum**

- The existing curriculum consists of six curricular areas prescribed for the primary stage, viz. Language, Mathematics, Environmental Studies (separated into Social Studies and Science, i.e. EVS I and II from Grade III onwards), Work Experience, Health and Physical Education and Art Education. In actual practice, in most schools the concentration is by and large on teaching only the

first three areas. The other three areas are generally neglected with many schools not even making a mention of these in the daily time table. Why does this happen? Does this mean that schools do not consider these areas important from the point of view of children's education? Possibly not, since none can debate their significance for all round development of the child. The more likely explanation could be that attainments in these areas are not assessed. In the examination driven system that we see around us today, since these areas do not involve award of any marks, they are likely to be neglected or not taught at all.

- In terms of content, EVS I, i.e. Social Studies comprises themes drawn from different areas of Social Sciences with a major focus on the physical environment and that in EVS II, i.e. Science, is drawn from the different subjects (disciplines) of natural sciences. Since the focus in these is on the subject/discipline rather than on the child and her/his environment, the instructional material that is prepared is also information loaded with little scope for child's active participation in the teaching learning process. Consequently, the teaching also focuses more on getting children to memorize the given in-

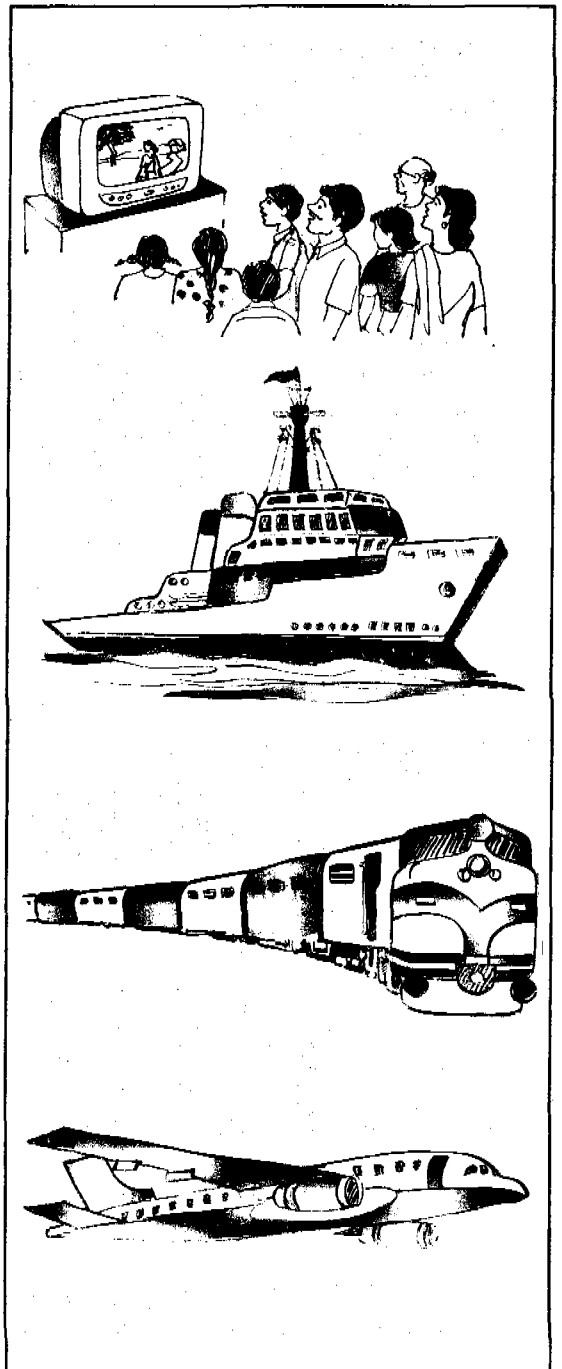


formation with little emphasis on helping children explore, experience, think, reason and want to learn more.

- *If we consider the curriculum from the child's point of view we can see that the three curricular areas of Language, Mathematics and Art, actually help the child, as tools for learning and communication. The content of these areas is derived from the environment itself. Since they need development of specific skills for which a systematic approach and practice is required, they need to be given a separate status. The four other areas of Science, Social Studies, Health and Physical Education and Work Experience all relate to different aspects of the child's needs and her/his environment and, therefore, need to be introduced to the child holistically and in an integrated way. This would not only help the child understand the environment better but also reduce both the child's learning load and the teacher's teaching load by doing away with inevitable overlap and repetition. It will also result in less confusion for the child as, is evident from the existing curriculum!*

### **The Changing World and Resulting Priorities**

- Due to significant developments in recent years in the area of communication technology, increasing



access to media, and availability of faster modes of travel, the world is gradually shrinking or coming closer. The child's level of exposure to the world around is increasing everyday. There is a virtual explosion of knowledge, making today's knowledge almost outdated tomorrow! This makes an information loaded curriculum irrelevant. It requires instead a greater focus on developing in children skills of learning to learn, so that they can keep themselves up-to-date through self-learning and make effective use of the available facilities.

- Advancements in Science and Technology are leading to changes in the ways and quality of life of people. In fact, technology has walked into the home of the common man both in rural and urban areas. With these developments, there appears to be a crises of values in society which tends to be getting more and more materialistic. In view of this,



there has been a great deal of stress on including both modern technology and value education in the primary curriculum. Both these areas, again, relate to the child's environment.

- The pattern of the smallest but the most significant social unit, i.e. the family, is also changing. Large and joint families are being replaced by small, nuclear families. Opportunities for the child, therefore, to develop habits of sharing, cooperation, living and working together are getting rare resulting in the concern today that the school curriculum should also address these aspects.
- As a result of aggressive advertising and marketing strategies, changed patterns of consumption and consumerism are also showing changes particularly in urban areas. The child's exposure to a wide range of consumer goods and several inappropriate role models is increasing. This has caused a change in the child's perception of her/his day-to-day needs and wants. Suitable choices need to be thought of and made by everybody, in a society that is getting more materialistic. The school of today must actively participate in the formation of the child's value system and attitudes, to counter some of the negative influences of modern living.
- Growing industrialization as well

as a growing population, have had an adverse effect on the environment. There is a growing lack of concern about care and protection of the environment and the maintenance of an ecological balance. This affects our day-to-day lives and behaviour patterns. The need to educate children and through them adults too, on appropriate behaviours and attitudes have become a major priority which needs to be reflected in the curriculum.

⇒ *Thus a change is called for — a change which will help schools prepare children for the world of the future. To implement this change, while coping with the growing numbers in our classrooms, requires fresh thinking on the context of the curriculum and new effective methods to be used by thinking, innovative teachers.*

**In view of the above concerns and issues, Environmental Education has been proposed as a curricular area which is much wider in scope as compared to the existing subject of Environmental Studies (Part I and II).**

### **Environmental Education — Its Scope**

⇒ **This curricular area views the environment as an integrated whole taking into its fold the**

**natural, the man-made, the social and cultural environment. It also takes into account the child's holistic perception of the world around her/him.**

⇒ **In its planning, a conscious effort has been made to integrate Science, Social Studies, Health and Physical Education and Work Experience from the existing curriculum, as also relevant areas of Technology, Yoga and Value Education to meet the demands of the present style of life of people. A specific concern for values is a special feature of this new Environmental Education framework as a value is not an abstraction for the individual but something that serves as a directing force in her/his actions and life. However, it cannot be learnt separated (divorced) from content.**

⇒ **An effort has been made not to merely club these areas together but to integrate them carefully so as to help the child understand the environment in a holistic, meaningful way. In this process, learning areas more relevant and interesting for a child have been prioritized to avoid making the curriculum heavy. It is important that both the teacher and the learners enjoy the interactions amongst themselves and with**

the environmental content. These should stimulate both, leading to deeper understanding and a stronger partnership in the process of learning. Child-friendly, active learning methods and multi-level teaching learning processes in the classrooms, within the prescribed teaching learning time available to teachers and children are essential. It is necessary to find time within school hours for the often neglected areas of Health and Physical Education and Work Experience. Links with other curricular areas like Language, Mathematics and Art also will have to be attempted as and when possible.



⇒ As indicated earlier, the curriculum plan suggests a three-fold approach to Environmental Education so that the child will:

- learn about the environment
- learn through the natural, man-made, social and cultural environment. This implies a

*systematic and active exploration of the environment by the child through a variety of activities aimed at developing relevant skills and attitudes.*

- *learn for the environment by developing genuine concern and sensitivity towards the environment and appreciating the need for its protection and enrichment.*

⇒ The approach to curriculum development suggested in the chapter follows the principles of:

- \* *moving progressively from the immediate (myself) to the distant (my country)*
- \* *moving from simple concepts and experiences to more complex ones*
- \* *moving from concrete experiences to more abstract ones*
- \* *moving from the particular to the general which will be made possible by the sequencing of the competencies*

⇒ An effort has been made towards making the experiences culturally specific by basing the curriculum plan on locally relevant situations. At the same time stress has been laid on the more global values and on development of pride in one's country and its cultural heritage.

⇒ **The framework suggests development of the curriculum in tune with the developmental needs of the child at the various levels/stages. It stresses the fact that the thinking capabilities of learners develop in a sequential way over time and there is a qualitative difference in learners' capabilities and learning styles at different developmental levels. It also recognizes the fact that even within a given developmental level, children show wide variations in their pace and style of learning.**

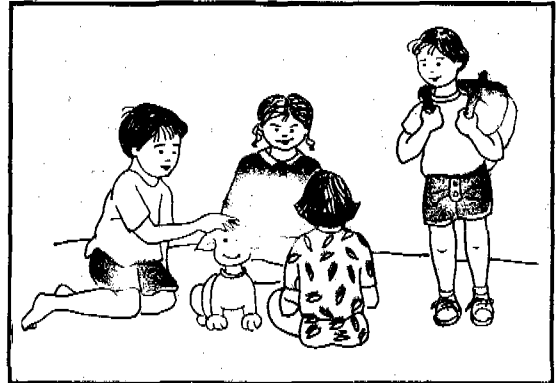
⇒ **A deliberate shift has been suggested from content-based learning to more active process-based and outcome-based learning.**

In the pages that follow, a framework has been worked out that lists the **Expected Learning Outcomes** at the end of five years of primary education and link them to the four **Pillars of Learning** viz.

- Learning To Know
- Learning To Do
- Learning To Live Together
- Learning To Be.

To facilitate attainment of these aims, **three key learning areas** have been identified. The content of these three areas is the medium through which the learning outcomes are to be realised. The Expected Learning

Outcomes and Key Learning Areas have to be linked and translated into suitable classroom transactions. Detailed indicators have also been worked out (see Appendix II) to help curriculum developers and authors to produce suitable teaching-learning materials. These indicators will also help teachers to plan appropriate classroom activities/experiences as also monitor the progress of children.



### *Expected Learning Outcomes*

#### **Learning To Know**

##### *(Knowledge base/Learning Skills)*

By the time the child completes primary education she/he should:

- develop and demonstrate varied skills for life-long learning such as observation, accessing and selecting information, classifying, reporting, experimenting, predicting, estimating, inferring and comparing etc.
- demonstrate the ability to think



- identify and know about the natural resources and understand the need for their proper utilization, conservation and preservation.
- become aware of groups that exist at several levels of organisations in nature as well as in the social environment, e.g. family, community, living and non-living things, etc.
- demonstrate an understanding of the interdependence of man and nature and of the need and ways of protecting the environment.
- demonstrate an understanding of distance in space and time and the relationship between them.

### Learning To Do (Work Skills and Attitudes)

By the time the child completes primary education she/he should:

- independently e.g. differentiate between facts and opinion, express one's own opinion logically.
- develop awareness and understanding about her/his personal well-being and ways to keep healthy
- understand the functions of the various parts of the body and recognize the need to keep the body, the belongings and the surroundings neat and clean.
- develop an understanding of the components of immediate social, cultural, natural and man-made environment and their interrelationships.
- demonstrate good health habits.
- participate in and enjoy activities for developing and strengthening concentration, stamina, speed, balance, coordination, endurance



and grace appropriate to her/his age group.

- participate in games and sports for enjoyment, relaxation, development of leadership qualities and team spirit.
- use standard and non-standard units of measurement.
- demonstrate the skills of estimation of physical quantities in daily life situations.
- observe and collect data about the different components of the immediate environment.
- plan and carry out simple, safe experiments/activities on her/his own.
- interpret and report observations in an appropriate manner (orally, in writing, pictorially, table, simple graph, chart, drawing, etc.)
- develop skills of sketching, mapping of local situations e.g. classroom, school, playground etc.
- develop skills of location using a grid, a map and globe.
- use simple, locally available materials, tools and equipment required in day-to-day situations with skill, efficiency and safety.
- demonstrate good work habits like neatness, accuracy, proper care of materials and tools.
- work with her/his own hands with ease and efficiency and

develop skills to take care of simple situations/problems in daily life situations and for possible use in later life.

- demonstrate skills related to taking care of the immediate environment.

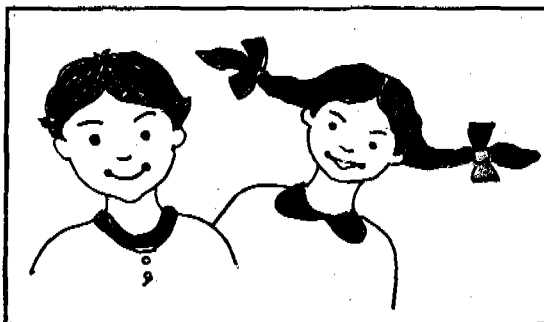
### **Learning To Live Together (Social Skills)**

By the time a child completes primary education she/he should:

- develop qualities such as tolerance, kindness, team spirit, sportsmanship, cooperation and demonstrate these through habits such as waiting for one's turn, sharing and helping others, taking responsibilities, working together with other children on projects/assignments, playing with them on the playground, participating in discussions/debates etc.



- develop initiative, self expression and respect for the views of others.
- learn to live in harmony with people of different communities by participating actively in celebrations of festivals of different religious, cultural groups etc. with enthusiasm and ease.
- learn to live in harmony with the environment and demonstrate this through actions such as caring for those in need and other living things, keeping the surroundings clean and conserving materials and energy.
- be aware of different work situations and available community resources, both individual and institutions and ways of taking help from them as and when required.
- be aware of the contribution made by people in the present and in the past and appreciate how these have affected the ways of her/his and the community's life.
- respect the rules/laws made for the benefit of the community and follow them.



- a human being, and demonstrate this through asking questions without hesitation, exploring and in interaction with others.
- imbibe some basic values specific to her/his context, e.g. honesty, punctuality, cleanliness.
- appreciate beauty in the environment and show a sense of aesthetic appreciation through expression in varied forms of art.
- appreciate dignity of labour.
- be aware of and appreciate one's own culture and traditions and be proud to be an Indian.
- show respect and concern for others and for the environment.
- apply her/his own mind and take independent decisions in simple situations in day-to-day life.
- develop scientific temper.

### Learning To Be Self Directed

By the time a child completes primary education she/he should:

- feel confident as a learner and as

### Key Learning Areas for Environmental Education

As already indicated, the curricular area of Environmental Education has



been conceived with focus on the 'child' as an individual and as part of the total environment. In other words, the attempt is to bring the needs of the child to the forefront rather than those of any subject (discipline). **The purpose is to facilitate the child's growth into a healthy, well adjusted person rather than loading her/him with subject based information.** No doubt the child needs information also but only as a 'tool' to grow not as a 'master' that most of the time stunts the multi dimensional growth of the personality. Keeping the developmental needs of the child at the primary stage in mind, the nature of the information/knowledge to be imparted has to be holistic.

The specific focus of the curriculum in Environmental Education thus, should be on helping the child:

- be physically and emotionally healthy
- function effectively as a member of the social groups (family, community) she/he belongs to
- acquire skills and attitudes for improving the quality of life of 'self' and that of the community
- appreciate the need to live in harmony with fellow human beings and the nature (emotional intelligence).

Keeping the above in view the learning content for this curricular

area has been divided into three **Key Learning Areas** indicating a progression starting from the child herself/himself to others around her/him and then to the large and more distant world.

The three **Key Learning Areas** thus identified are:

⇒ **Me and My World**

⇒ **Others in My World**

⇒ **The World Around Me**

Since the 'environment' is holistic in nature, some overlapping is bound to be present in the Key Learning Areas but the same will be useful for reinforcement in learning.

With a view to keep the depth and scope of the area of study within the reach of the child vis-a-vis her/his needs as defined in terms of physical, cognitive, socio-emotional needs in the chapter on 'Child in Primary' in Part I of the document, it is necessary to work out the scope of each Key Learning Area.

Each Key Learning Area encompasses the three levels. Level-wise indicators for each Key Learning Area have been included in Appendix II which can be used as guidelines for developing curriculum as well as instructional material, and for monitoring the progress of each child. Appendix I defines the scope of Common Core Components that could be integrated while outlining the content of the **Key Learning Areas**.



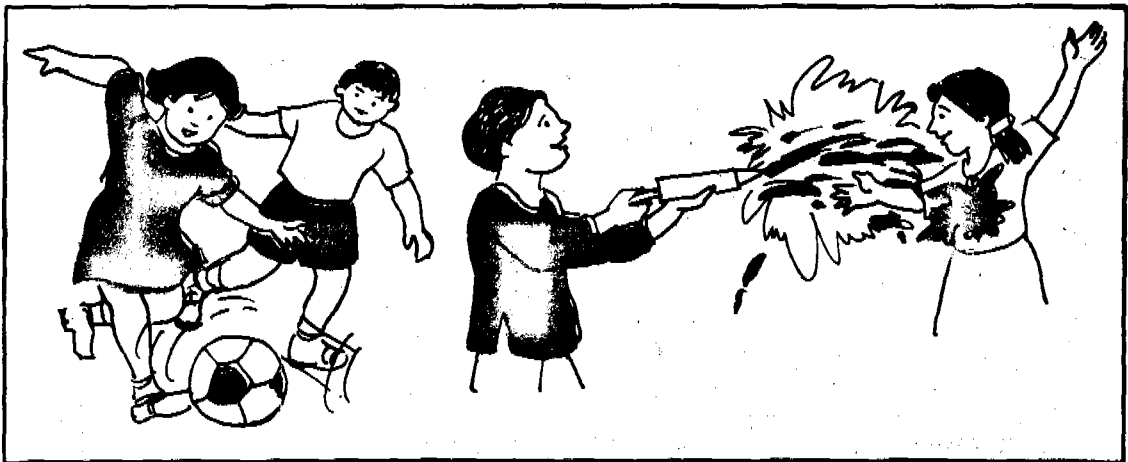
school she/he has already formed some habits, is conscious of some of her/his needs and feelings, and is also aware of visibly identifiable parts of her/his body. She/he is also aware that people around her/him have similar needs, feelings and similar body parts. Early Childhood Education/School Readiness Programmes where available help provide/reinforce opportunities for habit formation related to care of the body, adjustment in groups etc.

### **Me and My World**

There is enough research evidence to indicate that at the early primary stage the child's frame of reference is her/his 'ownself'. The world of the child is centred around his or her being. That is the focal point from which the child relates to the immediate world, which enlarges in concentric circles as the child develops and grows. Hence the point at which we begin is 'Me'. By the time the child enters a primary

**Keeping the above in view, the KEY LEARNING AREA focusses on the need to help the child:**

- understand the significance of and functions of every part of the body and take its proper care.
- receive experiences of a variety of sensations and identify them with increasing level of clarity.
- identify feelings/emotions, the situations that cause them and learn to channelise them positively.



- differentiate between needs and wants and appreciate the necessity of giving priority to basic needs.
- understand the need for and take suitable food which would provide nutrients for energy, growth and help regulate the body's functions and identify local foods that satisfy these requirements.
- develop regular habits of keeping 'self' and the surroundings clean.
- participate in activities to promote health awareness and safety and encourage peers to do likewise.
- know about and make use of public services provided for health and safety.
- understand the significance of participating in physical exercises, simple yoga exercises, rhythmic movement, dance, games and sports regularly, in order to keep the body and mind healthy.
- develop confidence in articulating her/his views/opinion and reasons thereof.
- take part in activities leading to creative expression and emotional outlet.



members of the family performing different roles, taking care of each other. The child is also aware that some days are special for her/him and the family. The scope of social interactions gradually expands to include in its fold the school, neighbourhood and beyond, thus requiring the child to understand the various facets of the social environment. There are individuals and institutions whom the child may not be knowing directly but who help in meeting her/his family's needs. There are people who may not be alive any more but who have contributed in a very big way to the comfort and ways of life, beliefs of the people around. The child is to some extent aware of the use of some means through which one can reach other places/people and even of some means through which one can reach friends, relatives without any physical movement.

Besides the men and the women, there are also animals and plants which are

### **Others in My World**

As the focus shifts from the child's ownself to include others, the child becomes aware of a world that includes the family which is the first school for her/him to develop desirable habits and attitudes. She/he observes

an inseparable part of the child's life and that of others around her/him, but for whom existence of human life is not possible.

The Key Learning Area thus aims at helping the child:

- understand that she/he belongs to several overlapping groups—family, neighbourhood, school, community and identify roles and relationship within them.
- recognise and appreciate the interdependence of people in these groups.
- receive and give support, in solving problems, while mutually respecting traditions and values.
- know about plants and animals and other living/non-living things and recognise their importance in her/his life.
- know about the discoveries and inventions which have helped in shaping the modern ways of life, such as the fire, the wheel, metals, etc.
- understand that people and events of the past have influenced our present way of life.
- know about the means of transport and communication and their importance in her/his life.
- develop an understanding of spatial relations and the ability to locate places.
- be aware of the rights and responsibilities of a consumer.

- respect the feelings of others and practise sharing, cooperation, tolerance and helping the needy etc.

### **The World Around Me**

This Key Learning Area attempts to take the child from her/his ownself and immediate social and familiar environment to a wider world. The child is aware of some natural phenomena that regulate day to day life such as day and night, weather, rain etc. There is a continuous interaction between human beings and the natural environment and both are affected in this interaction. The child must understand the nature of this interaction and how it affects the life of people.

Thus the key learning area aims at helping the child

- acquire knowledge about the natural features, phenomena and resources that influence the life of people in terms of food, shelter, clothing, occupations and cultural patterns.
- understand how natural resources and their utilization influence the quality of life.
- recognise and give examples of the impact of scientific, industrial and technological developments on human life and natural phenomena.
- observe and recognise changes in self, others, the environment and those changes that have occurred over a time-span.

- understand that every member of a group has rights and responsibilities towards oneself and others in the group and practises the same.
- be aware of the need for and the existence of a structured system of governance at various levels.
- acquire skills of location, interpretation of data.
- perform simple experiments involving scientific principles and draw inferences.

### **Content : Major Themes**

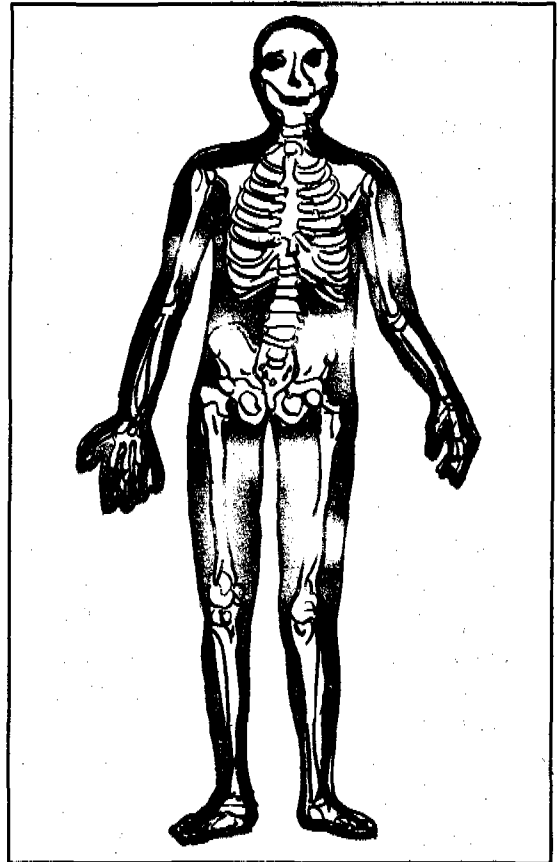
The main content of the teaching-learning activities at three levels in the three Key Learning Areas would be based on the following major themes. These themes have been drawn from the existing curricular areas of Environmental Studies, Health and Physical Education, Work Experience, Value Education and Technology etc. and allow for a lot of flexibility for inclusion of local specific content.

### **Key Learning Area : Me and My World**

#### **Major Theme : My Body**

##### **Sub-themes**

- External (visible) and internal organs
- Sensations and feelings
- Needs —



#### **Drawn from**

- Environmental Studies II
- Health and Physical Education
- Yoga Education
- Value Education
- Work Experience

#### **Physical**

- ⇒ fitness
- ⇒ food and nutrition
- ⇒ personal hygiene, cleanliness and orderliness

- ⇒ sleep
- ⇒ physical exercises, sports and games
- ⇒ safety measures (avoiding accidents)
- ⇒ work skills

*Emotional*

- ⇒ relaxation
- ⇒ security
- ⇒ belongingness, affection etc.
- ⇒ values like sharing, tolerating, cooperating
- ⇒ attitude towards manual work

**Key Learning Area : Others in My World**

**Major Themes :** *Social Institutions and Living things*

**Sub-themes**

- Family, peers, neighbours, community—their functions, interrelationships and interdependence.
- Festivals both national and local—their significance and celebrations.
- Local institutions/agencies—their role in individual's and community life.

Drawn from

- Environmental Studies I and II
- Technology
- Work Experience
- Value Education

- Plants and Animals — their linkage and significance in human life
- People/personalities who have contributed to what our lives are today — national and local greatmen, scientists, discoverers, architects, artists etc.
- Means of communication and transport — their impact on life of people.
- Skills related to
  - ⇒ collection of information (data), its interpretation and reporting/representation
  - ⇒ local occupations and their development (suitable to age-level)
  - ⇒ location of places on the globe and maps

**Key Learning Area : The World Around Me**

**Major Themes :** *Significant features of natural and man-made environment, the non-living things and materials, time and space; significant features that make one proud of the country, scientific temper*

**Sub-themes**

- The physical features and phenomena — The earth, the sun, the moon, the sky, day and night, weather, climate, land forms/soil — their influence on human life
- The non-living things, materials, — their characteristics/properties

Drawn from

- Environmental Studies I and II
- Value Education
- Technology

and role in human life, the need to protect them.

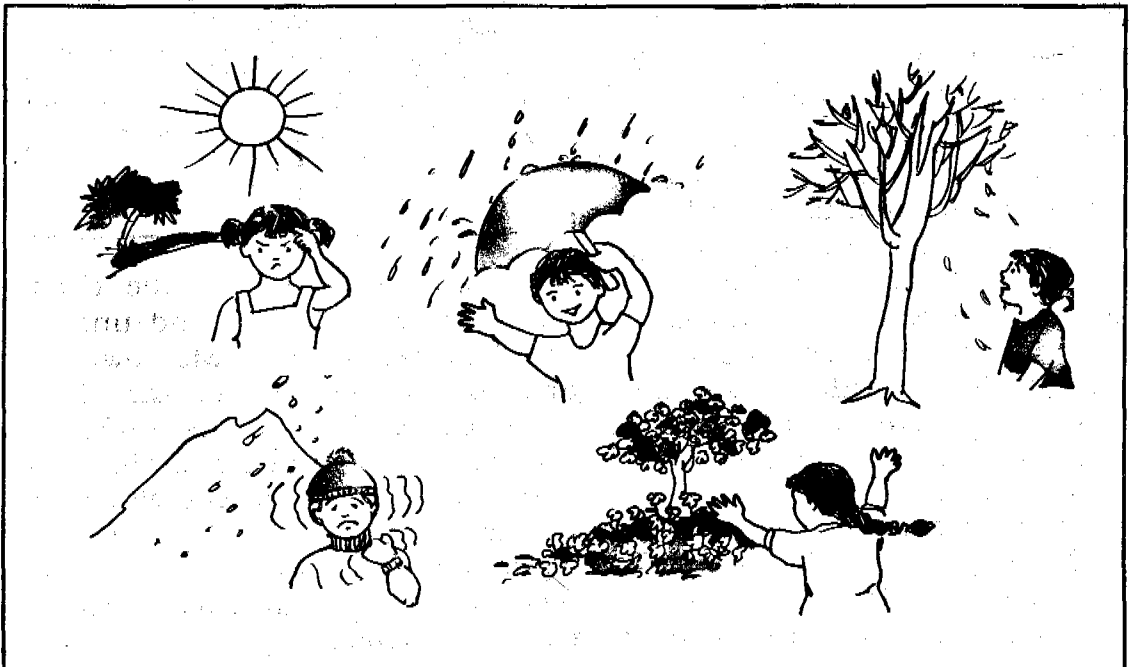
- Space and Time — concept, their relationship
- Significant achievements in various fields —
  - ⇒ local/national,
  - ⇒ past and present

**Note:** Suggestive content related to common core components has been listed in Appendix I. It has been taken care of to a great extent in the

selection of themes and indicators in Appendix II.

### ***Integrating Environmental Education with Other Curricular Areas***

Environmental Education in its very nature is integrated as it encompasses in a meaningful way all those components which are currently part of EVS I and II, Health and Physical Education and Work Experience. However, its teaching learning process can also very easily be linked to skills in Language, Mathematics and Arts Education. In fact all these curricular areas draw their content from the environment.



Language, as such is being used as a tool for learning which can be true for any curricular area. Identification of content in teaching language can be so planned that it covers environmental concepts systematically and simultaneously taking care of the different skills in language.

Mathematics is everywhere in day to day life which is the base of Environmental Education. Introduction of concepts like measurement, representation of data in different graphic forms, interpretation of data, shapes and designs etc. which are part of both the curricular areas can be planned in such a way that they acquire meaning and thus become joyful. This type of attempts can help in reducing the curricular load through avoiding repetition of the same content, and experiences related to daily life would definitely reduce the load of non-comprehension.

Different modes of arts are media of expression which can prove to be very effective and interesting for Environmental Education. In fact the content of Environmental Education is directly linked with arts in many forms such as our cultural heritage and its richness, designs of buildings/monuments, clothes worn by people, folk/classical music and dances, beauty in the environment and much more. Integration of Arts Education and Environmental

Education can be easily exploited which is reflected in the indicators included in Appendix II.

### **Teaching-learning Strategies and Assessment**

**What does the focus of the Learning Areas indicate? How can we help the child in this direction?**

For finding answers to these questions let us recall the chapter on 'Making Teaching Child-centred' in Part I of this document.



To create awareness in the child about the environment and understand its relationship with oneself and the people around, the child must be exposed to its different components through direct observation/practical experiences either in the actual/real situations or creating a similar situation in the classroom/school through using concrete material or aids like pictures, charts,



models, science apparatus, or creating simulated situations through dramatization, role play, puppet play, mono-acting etc. supported by stage setting, if possible, at times.

The above mentioned activities can be used in varied situations and with children at different levels within a grade. As we are all aware, children in a grade are differently abled, have different levels of attainment, have different interests and aptitudes and the teacher is expected to address the needs of all the children at the same time. Environmental Education provides a wide scope to the teacher to adopt a variety of teaching learning strategies ranging from individual work/assignments to whole class teaching through small group activities. (refer chapter on 'Teaching Learning with a Difference' for details).

As already discussed in Part I, assessment is not something of which the child and the parents have to be afraid. It must be remembered that it is part of the teaching learning process. The teacher assesses the child informally all the time with a view to provide help as and when/she/he needs it.

Formal assessment, when planned, should be integrated with the process of teaching and learning activities on a continuous basis. It should be largely observation and oral at level I. Written answers may be in-

troduced gradually from level II but should be supplemented by other tools/techniques especially with reference to the objectives of Environmental Education which emphasize the processes involved in learning and development of values, attitudes, practical skills, healthy habits and problem solving in actual life situations. The tools could range from simple checklists for observation of children in different teaching learning situations to oral exercises, art activities, role play, drama situations, paper pencil tests etc.

### **Remember**

- *Many times the experiences planned for teaching can also be used for assessment*
- *Assessment must focus on each of the four pillars not only on learning to know*
- *Assessment should take into account the process rather than only the product (the answer)*

Aren't life's problems always open ended? Should we not make assessment also open ended?

(The indicators listed against the Expected Learning Outcomes (ELOs) in Appendix II of this chapter would help the teacher maintain a record of the progress of the child. These

would also provide hints for planning activities for facilitating the learning on the part of each child).

As discussed in chapter 'The Child in Primary' in part I of this document the developmental level and needs of the children differ across two developmental stages of children (3-7 years & 7 to 11 yrs.) at primary stage of education. While at stage I corresponding to level I children are more playful and guided more by what they see than by logical thinking, the children at stage II corresponding to levels II and III become more logical in their thinking and reasoning, can work more productively in pairs and groups and can take more initiative and responsibility in planning and consolidating their learning.

To meet these needs the experiences to be provided would have to be different in nature and complexity for each stage. Level III is a stage of consolidation and readiness for upper primary stage. The experiences at this level should be more of application, exploration, self learning in nature.

### Stage I

(Corresponding to Level I)

#### Experiences planned should

- provide opportunities to children to relate learning to personal experiences in daily life
- provide for varied interests of children



- provide for children to handle/manipulate concrete material
- provide opportunities for children to physically participate in playful activities leading to active learning
- focus on habit formation of children
- provide opportunities for children to express in forms other than writing (speaking, drawing, dramatising etc.)
- provide opportunities for children to discover their surroundings through personal observation and shared observation with other children
- encourage/stimulate children to ask relevant questions and find answers through different sources.

### Stage II

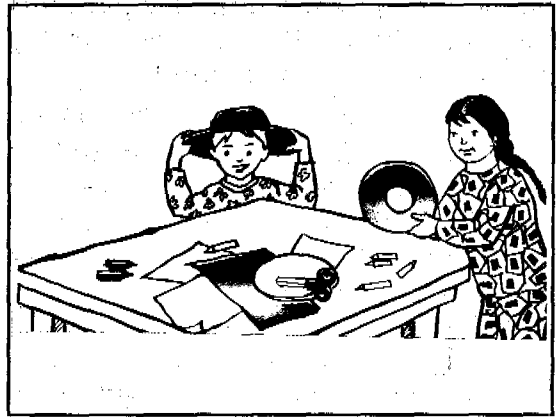
(Corresponding to Levels II and III)

#### Experiences planned should

- provide children opportunities for

more specific observations, for asking questions related to the observations, looking for/discovering their answers through different means, and reporting the findings through varied modes of expression

- involve children's observation in real life situations and identify patterns and handling of experiments with concrete materials/objects
- help children analyze problems and take individual or collective decisions based on facts to arrive at solutions
- involve more of child to child interaction in planning and conducting of activities leading to active learning
- involve children in more of self learning by identifying sources of information, selecting information
- provide opportunities for children to use more of written form in giving answers/reporting along with other modes of expression
- involve children in understanding cause and effect relationships through experiences in situations directly and indirectly.
- involve personal experiences through planned visits to places/institutions/people involved in varied situations of the life of the community
- involve children in activities in real life situations such as surveys, campaigns, shramdans etc. or in



contrived situations and reporting the findings through different modes.

### **Please Remember**

- *experiences planned for habit formation, development of attitudes and values will continue across the levels*
- *continuous watch needs to be kept on each child in relation to the above so that they become a part of the child's nature by the time she/he reaches/completes level III.*

### **Teaching-learning Materials**

As per the nature of the curricular area, the best learning materials are the actual objects, living and non-living things in the environment of the child and the real life day-to-day situations. Since it is not possible to procure and interact with actual objects always, its representation in the form of pictures, charts and models can be used in the classroom situations.



For classroom activities, specially designed Workbooks for level I, Textbook-cum-Workbooks for levels II and III in the form of graded modules and Handbooks for teachers need to be developed. The Workbooks for level I should comprise only activities and will involve limited reading or writing in view of the child's lack of skills in these at this stage. But the Teacher's Handbook should contain detailed instructions to help the children actively participate in all the activities.

Books are for teacher to read.

Tiny tots should only play

GANDHI, M.K.

The Textbook-cum-Workbooks for levels II and III should have activities presented in a variety of ways such as stories, anecdotes, poems, dialogues, hints for discussions, open ended les-

sons etc. to cater to varied needs of children.

Different media (both print and non print/electronic) such as library books, newspapers, magazines, radio and television programmes are other sources of getting information.

Play material, games and sports equipment and equipment needed for physical exercises including rhythmic movements such as some musical instruments and other locally available materials/tools for manual activities etc. are needed to develop related skills and values.

(For more details please refer to Learning Corners in Chapter 6.)

The learning experiences mentioned earlier are not exhaustive but these will have direct link with the three Key Learning Areas and the specific content identified by different agencies with reference to the local environment. But whatever is the content and the specific learning experiences/activities, the focus would be to help each child attain the major learning outcomes aimed at in each pillar. Some suggested indicators are given in Appendix II.

**Please Note: The indicators are not in the Teaching Sequence. They can be clustered in any way as per situation(s).** There need not be one to one relationship in any situation such as curriculum development, development of instructional material, teaching-learning process including assessment.

### **Common Core Components**

A conscious effort, has been made to integrate the common core components as specified in the National Policy on Education (1986/1992) in ways appropriate to the primary stage of education as follows:

- the history of India's freedom movement—in the form of stories of local/national freedom fighters, anecdotes etc.
- the constitutional obligations—in the form of rights and duties of the child as a citizen and as specified in the pillars learning to live together and learning to be.
- content essential to nurture national identity—in the form of national symbols, national days, interdependence of people living in different parts of the country, variety in food, clothing and ways of life etc.
- India's common cultural heritage—such as role of important men and women in making India and our lives what they are today, historical monuments, dances and music (both classical and folk).
- egalitarianism, democracy and secularism—such as need for equal opportunities to all the people.
- equality of sexes—such as contribution of both men and women in political, social and economic life.
- protection of the environment—such as knowledge about the environment, the need and ways to protect it and habit formation in this context.
- removal of social barriers—such as equality of all irrespective of caste, religion or language, interdependence of different members of community etc.
- observation of the small family norm—such as impact of smaller and bigger numbers on life situations.
- inculcation of scientific temper—such as development of habits of critical thinking, reasoning etc.

## APPENDIX II

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This part of the chapter contains some exemplar indicators/suggestions for use by teachers, authors of instructional material and curriculum developers.

**Please Note:**

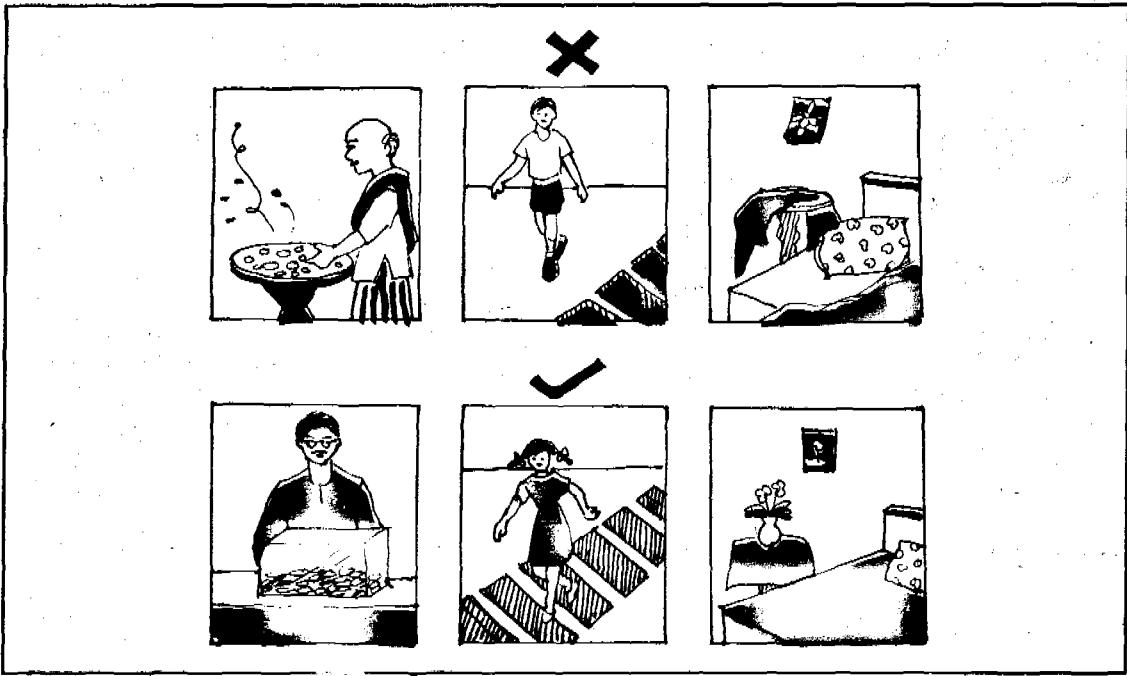
- They are not exhaustive
- All of these need not be compulsorily used by users all the time, some additional ones can also be included
- They are not in teaching sequence.
- They may be used for developing graded 'modules'
- They may be clustered into different sets for providing learning experiences and monitoring the progress of each child in different situations.

**Key Learning Area : Me and My World****Major Theme : My Body****Sub-theme : Body parts (external and internal organs) sensations and feelings.****ELOs : The child should**

- understand the functions of different parts of the body
- develop and demonstrate skills of life long learning such as observing, selecting information, comparing, reporting etc.

**Indicators**

<i>Level I</i>	<i>Level II</i>	<i>Level III</i>
<b>The child</b>		
<ul style="list-style-type: none"> <li>• observes and relates orally how 'I am' similar and how 'I am' different from other members of the family</li> <li>• differentiates between 'myself' and 'my friend' and reports orally/pictorially through actions</li> <li>• relates (orally/through actions) how she/he uses different parts of the body</li> <li>• differentiates through touch between hard, soft, cold/warm, surfaces and liquids like water</li> <li>• differentiates between the tastes of different eatables expresses orally/through actions/body talk/ facial expression</li> <li>• differentiates between the sounds in the immediate environment and the distant places</li> </ul>	<ul style="list-style-type: none"> <li>• enquires from parents and reports the story of 'How I grew up' and changed'</li> <li>• compares these changes with those in friends and other members of the family</li> <li>• understands that rate of growth differs in different individuals</li> <li>• accepts and respects differences between individuals</li> <li>• identifies the names of major organs of the body related to processes like breathing, ingestion and digestion of food, excretion etc.</li> <li>• perform simple activities/ experiments and finds that making changes in the form of some materials leads to changes in their surface</li> </ul>	<ul style="list-style-type: none"> <li>• identifies the internal organs of the body in a chart and knows their functions</li> <li>• identifies and describes simply the following system of human body               <ul style="list-style-type: none"> <li>— skeletal system</li> <li>— digestive system</li> <li>— respiratory system</li> <li>— circulatory system</li> <li>— excretory system</li> </ul> </li> <li>• practices habits to keeps these systems in proper form</li> <li>• depicts through role play, drama drawing, the likely effects if any of the system has a problem</li> <li>• experiments and finds out that different parts of the tongue help in identifying different tastes</li> </ul>



Level I

Level II

Level III

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• differentiates between the pleasant and unpleasant sounds</li> <li>• identifies situations that make her/him happy, sad, angry etc.</li> <li>• expresses feelings in different ways (through speaking, drawings, dancing, singing, facial expressions, etc.)</li> </ul> | <ul style="list-style-type: none"> <li>• participates in activities leading to creation of pleasant sounds (musical, rhythmic)</li> <li>• identifies and names the different sense organs and develops habits of taking their proper care</li> <li>• participates/performs activities that give happiness to others</li> <li>• does not hurt the feelings of others</li> <li>• take care of the animals, bird, plants and helps the old, the sick</li> </ul> | <ul style="list-style-type: none"> <li>• understand the harmful effects of loud and unpleasant sounds</li> <li>• understands the significance of sense organs in human life and the need and ways to take their proper care</li> <li>• develops the qualities of a good human being</li> <li>• experiences the sounds of her/his body through exercising concentration</li> <li>• respects the feelings of others</li> </ul> |
|--|--|--|





**Sub-theme : My Needs** (*Physical Fitness, Emotional fitness*)

**ELOs : The child should**

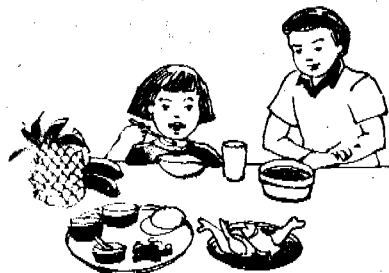
- develop awareness and understanding about her/his personal well being and ways to keep healthy
- demonstrate healthy habits
- participate in and enjoy activities for developing and strengthening concentration, stamina (both physical and emotional), speed, balance, coordination, and grace appropriate to her/his age group
- develop positive attitudes towards doing work with hands and participate in activities involving manual work and develop necessary skills
- apply her/his own mind and take independent decisions in simple situations and in day to day life
- follow rules and take precautions to avoid accidents
- demonstrate good work habits like neatness, accuracy, proper care of materials and tools
- use simple, locally available materials, tools and equipment required in day to day life with skills, efficiency and safety

Level I	Level II	Level III
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**The child**

- relates, orally/through actions her/his daily needs
- finds out the daily needs of friends/peers and compares the needs of self with those of others
- recognises that most people have common needs
- recalls what she/he eats/drinks everyday
- relates the habits followed before and after taking food and the reasons thereof
- associates food with the ability to play and work
- develops habits of safe handling of food and drinking water

- distinguishes between needs and wants
- displays regular habits that help meet the needs of self and others around her/him
- recognises that wants keep changing whereas needs are more constant
- displays understanding through habits and actions the necessity to meet the basic needs
- understands the need for and follows regular habits of taking food and cleanliness of hands and eating place.
- recognises the need for and ways of safe storing of food items and drinking water and shares them through role plays, poems, songs, drawing etc.
- finds out the sources from where the food items and drinking water are obtained
- recognises the importance and develops habits of eating roughage and drinking plenty of water
- finds out how each food stuff is useful for human being (for giving energy, body building, preventing disease etc.) and reports findings orally through role play/dramatisation or in writing



- recognises that it is necessary to eat a variety of food items for growth and to maintain good health
- classifies local food items on the basis of their nutrients
- depicts, relationship between lack of particular nutrients in the diet and occurrence of deficiency diseases, through participation in dramas, discussions etc.
- displays knowledge of taking different combinations of local food items to avoid occurrence of deficiency diseases

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• acquires and practices the habits of personal cleanliness including toilet habits</li> <li>• keeps personal belongings and the classroom clean and in order</li> <li>• observes and reports lack of order and cleanliness in immediate surroundings</li> <li>• takes simple steps to correct these situations</li> </ul>	<ul style="list-style-type: none"> <li>• associates good health with personal cleanliness and displays them through drama, drawing etc.</li> <li>• keeps a check on the habits of personal cleanliness of siblings and peers and encourages them to follow these habits</li> <li>• keeps immediate surroundings clean and participates in activities for cleanliness of school/ neighbourhood</li> <li>• realises that each individual has a responsibility and role in keeping the surroundings clean</li> <li>• identifies the ways of collection and disposal of solid and liquid waste at home, school and the locality and the agencies responsible for it</li> </ul>	<ul style="list-style-type: none"> <li>• identifies relationship between unclean food and water and occurrence of diseases</li> <li>• identifies relationship between unclean habits/ unclean surroundings and occurrence of communicable diseases</li> <li>• knows about the agencies to be contacted in case of occurrence of certain diseases</li> <li>• identifies situations where ORS is needed and motivates the family members to use it when needed</li> <li>• develops skills to prepare ORS and its local substitutes</li> <li>• identifies and participates in steps taken to prevent certain diseases</li> <li>• identifies local communicable diseases as air borne, water/food borne and insect borne</li> <li>• identifies and practises simple ways of reusing and recycling of some waste materials</li> </ul>

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• knows about the sources of drinking water and its significance for human life</li> </ul>	<ul style="list-style-type: none"> <li>• knows about the sources of drinking water and its significance for human life</li> </ul>	<ul style="list-style-type: none"> <li>• knows about different ways of purifying water and demonstrate them through simple experiments.</li> </ul>
<ul style="list-style-type: none"> <li>• practises simple habits of standing in a queue when required, waits for her/his turn in different situations/group activities</li> </ul>	<ul style="list-style-type: none"> <li>• knows about the safety symbols for walking/crossing the road and shares them with peers/siblings orally, through drawing etc.</li> </ul>	<ul style="list-style-type: none"> <li>• identifies situations leading to accidents at home, school, locality and takes precautions to avoid accidents</li> </ul>
<ul style="list-style-type: none"> <li>• practises simple habits such as covering mouth/nose during coughing/sneezing/yawning</li> </ul>	<ul style="list-style-type: none"> <li>• follows habits of personal safety and rules for walking on/crossing the road/railway line</li> </ul>	
<ul style="list-style-type: none"> <li>• understands the need for the above and demonstrates the effects of not doing so through dramatizing, drawing, puppet play etc.</li> </ul>	<ul style="list-style-type: none"> <li>• demonstrates use of simple tools such as sewing needle, paper cutter, scissors, small hammer broom etc.</li> </ul>	<ul style="list-style-type: none"> <li>• identifies and knows how to inform appropriate persons in case of an accident/emergency</li> </ul>
	<ul style="list-style-type: none"> <li>• takes necessary precautions while using simple tools in work situations</li> </ul>	<ul style="list-style-type: none"> <li>• acquires the skills to use some basic first aid measures in case of simple burns and cuts</li> </ul>
	<ul style="list-style-type: none"> <li>• is aware of what to do in case of any accident/injury and inform appropriate person(s)</li> </ul>	
	<ul style="list-style-type: none"> <li>• participates in discussions on the need to follow rules</li> </ul>	
<ul style="list-style-type: none"> <li>• participates regularly in simple physical exercises, related to every part of the body and indoor and outdoor games</li> </ul>	<ul style="list-style-type: none"> <li>• performs exercises related to every part of the body including the mind (concentration) and understands their significance</li> </ul>	<ul style="list-style-type: none"> <li>• understands the rules of different games and follows them</li> </ul>

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• shares with peers the material required in different games/play activities</li> <li>• takes proper care of the games material and keeps them at the right place after use</li> <li>• participates in slow inhaling exercises</li> <li>• tries to hold breath for 1/2 seconds and then releasing it</li> </ul>	<ul style="list-style-type: none"> <li>• practises correct body position while walking, sitting, reading etc. and identifies the harmful effects of incorrect body position in day to day life</li> <li>• participates in games that provide opportunities for entertainment, joy and healthy competition</li> <li>• participates in deep breathing exercises</li> <li>• tries to hold breath for 5/6 seconds and then exhaling it slowly</li> <li>• sits still and listen to the sounds in the environment</li> </ul>	<ul style="list-style-type: none"> <li>• acquires and practises the values of sportsmanship and team spirit such as tolerance, cooperation, acceptance of defeat and victory with grace</li> <li>• takes proper care of the games equipment and places it at proper place after use</li> <li>• tries to control breath up to a minute and then exhaling it slowly</li> </ul>



**Key Learning Area : Others in My World**

**Major Theme : Social Institutions and Living things**

**Sub-themes : Family, community; cultural heritage, scientific and technological developments, means of transport and communication; plants and animals**

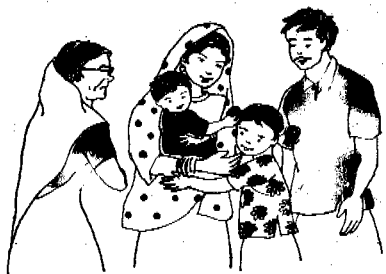
**ELOs : The child should**

- develop an understanding of the components of immediate social, cultural man-made and natural environment and their interrelationships
- become aware of groups that exist at several levels of organisations in nature as well as in the social environment e.g. family, community, living and non-living things etc.
- demonstrate the ability to think independently e.g. differentiate between facts and opinion and express one's own opinion logically
- demonstrate an understanding of the interdependence of man and nature and of the need and ways of protecting the environment
- demonstrate skills of measurement with standard and non-standard units, skills of estimation of physical quantities in daily life situations; skills related to collection, presentation and interpretation of data, skills related to location of places, data etc.
- plan and carry out simple safe experiments/activities individually or in a group and reports findings in appropriate ways and demonstrate qualities of leadership, taking responsibilities, working together on projects/assignments, sharing and helping others
- demonstrate skills related to taking care of the immediate environment
- learn to live in harmony with people of different communities and participate actively in celebration of festivals of different religions and cultural groups
- demonstrate through appropriate actions sensitivity to the needs and feelings of fellow human beings and other living things
- develop awareness of the contributions made by people in the present and past and appreciate, how these have affected the ways of her/his and the community's life
- respect the rules/laws made for the benefit of the community and follow them.

**Indicators**

<i>Level I</i>	<i>Level II</i>	<i>Level III</i>
<p><b>The child</b></p> <ul style="list-style-type: none"> <li>• identifies simple relationships with members in the family and reports these through drawing, stories, dramatisation, focusing on the roles of family members</li> </ul>		<ul style="list-style-type: none"> <li>• knows the concept and significance of community and shares it with peers in appropriate ways</li> </ul>

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>identifies simple relationships between people in the immediate neighbourhood</li> <li>realises that every member in the family/neighbourhood has some responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>talks to parents and other members of the family about their occupations and reports in appropriate ways</li> <li>interacts with people in different occupations and reports their significance in her/his family's life through writing orally, drawing, role play, drama etc.</li> <li>understands and reports the interdependence of members in family/neighbourhood and community</li> <li>surveys and reports about some common essential facilities in the locality such as drinking water, electricity, park, primary health centre etc. and who manages them (panchayat/municipality)</li> <li>identifies people who enforce rules at home, school neighbourhood, on the road etc. and reports about them appropriately</li> <li>imagines situations what would have happened if there had been no rules and shares them through stories, illustrations, drama etc.</li> </ul>	<ul style="list-style-type: none"> <li>identifies own family's role and duties in the neighbourhood and participates in performing duties at her/his own level</li> <li>knows about the rights and duties of every member in the community and respects them</li> <li>finds out about the agencies/bodies/institutions that ensures the rights of every member in the community</li> <li>finds out simple facts about how these agencies (local/state/national level) are constituted and shares the information with peers through role play, drama or in any other appropriate way</li> <li>follows rules identified for the community and collects information about the local authorities that enforce them</li> <li>differentiates between a rule and a law and finds out how laws are enforced</li> <li>explains very simply (without use of technical vocabulary) the need for a government           <ul style="list-style-type: none"> <li>to represent people</li> <li>to fulfill the needs of the people</li> <li>to make and enforce laws</li> </ul> </li> </ul>



Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• identifies some activities that she/he does with her/his family for fun and enjoyment and reports these pictorially or through drama or stories</li> <li>• names the festivals and other occasions that the family/neighbours celebrate and reports how they are celebrated</li> <li>• identifies the household and other materials which are a source of entertainment and joy such as toys/games material, radio/TV, cinema, visit to fairs, exhibitions, museums, zoos etc.</li> <li>• participates in singing the national anthem</li> </ul>	<ul style="list-style-type: none"> <li>• identifies and participates in local festivals with the family and shares these experiences, with peers in appropriate way</li> <li>• finds out from elders the significance of these festivals and the stories, if any related to them</li> <li>• identifies national symbols and respects them and describes appropriately each symbol</li> <li>• memorizes the national anthem and sings it with proper respect, correct pronunciation and tune in specified time</li> <li>• listens to and reads stories about local and national leaders</li> <li>• listens to and reads stories about people who made discoveries and inventions which have made our lives comfortable</li> <li>• visits important places/monuments in the neighbourhood and finds through talking, reading (from library books) stories if any, associated with these and shares them with peers</li> </ul>	<ul style="list-style-type: none"> <li>• recognises the pictures of the current and national leaders (President, Prime Minister) and names them</li> <li>• collects information about the highlights of the freedom struggle and shares it with peers in the form of stories/anecdotes etc.</li> <li>• shows due respect to and appreciates the contributions made by local/national leaders in the struggle for freedom</li> <li>• collects information about people such as architects, painters, dancers, musicians, writers etc. who have made our culture rich in the past and present and shares it with peers</li> <li>• attends performances, if possible, by known artists in different fields and enjoys them</li> <li>• finds out from elders in the family/community what changes have taken place in their own lives during their life time and also the social, cultural and political life</li> <li>• finds out how new discoveries in science, medicine, technology have brought about changes in daily life and shares the information in appropriate ways</li> </ul>



Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• identifies the local means of transport, differentiates between fast and slow moving vehicles and shares the knowledge about them orally, through actions, drawing etc.</li> <li>• collects pictures/drawings of different means of transport and prepares scrap books alongwith classmates in a small group</li> <li>• identifies means through which we can send and receive messages from others living in the same city/village or another city/village</li> </ul>	<ul style="list-style-type: none"> <li>• relates orally/in writing the experiences of the visit to relatives/friends living in distant places</li> <li>• finds out how one can reach people who are away without going personally and differentiates between means of transport and means of communication</li> <li>• listens to and reads stories about persons who invented important means of transport and communication and shares them with peers</li> <li>• writes about/relates orally the journey of a letter from one place to another</li> <li>• learns how to operate radio/TV, telephone and other gadgets at home and takes necessary precautions</li> </ul>	<ul style="list-style-type: none"> <li>• visits (with parents/teachers) places like industrial places, hospitals, banks or any other place, interacts with people working there and shares the experiences with peers</li> <li>• discusses in small group of classmates/peers how developments in means of communication and transport help in bringing people and places nearer to each other and reports in appropriate way</li> <li>• finds out how the means of transport and communication are harmful to the health of common man and precautions that should be taken to avoid the harm effects.</li> <li>• visits with elders/teachers a post/telegraph office, bus station, railway station, airport, radio/television station, newspaper office, if possible, and shares her/his experiences in different ways</li> <li>• differentiates between means of communication for individuals and masses</li> <li>• differentiates between fact and opinion</li> <li>• cites examples how information available through mass media help her/him in different ways (studies, health habits, physical exercises, entertainment, values etc.)</li> </ul>

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• guides friends/peers how to find her/his house if they want to pay her/him a visit (H.No, name of the street/road etc.)</li> <li>• uses verbally/and in action simple relative direction words correctly such as in front of, at the back, left, right, next to, above, below etc.</li> <li>• uses simple terms to describe relative size and distance</li> </ul>	<ul style="list-style-type: none"> <li>• reads and interprets symbols for directions, crossing the road, level crossing etc.</li> <li>• knows how to find out a place with the help of standard and non-standard symbols and demonstrates through drawing, dramatization etc.</li> <li>• draws a simple plan of classroom and other small areas, not to scale, using symbols to show the position of things</li> <li>• measures distance in non-standard units in the classroom, between classroom and different places in the school such as library, main gate etc.</li> </ul>	<ul style="list-style-type: none"> <li>• draws sketch maps, not to scale showing, routes from school to nearby places indicating landmarks : d directions of movement</li> <li>• uses globe, maps of the city/state/country to locate places and other important information</li> <li>• knows about the significance and the use of symbols and scale on maps and globe</li> </ul>
<ul style="list-style-type: none"> <li>• identifies the animals and plants found in the surroundings</li> <li>• draws/collects pictures of the animals/plants found in the surroundings</li> <li>• shares her/his feelings about a pet/domestic animals if any in home, with peers, friends</li> </ul>	<ul style="list-style-type: none"> <li>• observes the animals/plants during visits to zoo/park etc., and shares the information with classmates orally through drawing, reciting poems etc.</li> <li>• talks to elders and finds out the uses of animals and plants in day to day life and reports in appropriate ways</li> <li>• participates in activities/related to planting/taking care of plants at home/school, appropriate to her/his age</li> <li>• knows the names of national bird, national animal, national parks etc.</li> </ul>	<ul style="list-style-type: none"> <li>• discusses in groups about the need to take care/protect the animals and plants, interdependence of human life and plant/animal life and reports in appropriate ways</li> <li>• finds out the characteristics of different types of animals and the different parts of their body and how they are useful to them</li> <li>• finds out how water animals and water plants are different from those found on land in the immediate environment</li> </ul>

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*Level I**Level II**Level III*

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- identifies how animals and plants are like human beings and how they are different
  - collects flowers, leaves of plants from the surroundings and prepares a scrap-book
  - observes classifies and reports the observable characteristics of animals in the surroundings
  - differentiates between a creeper, plant and a tree
- appreciates the beauty in animal and plant life and expresses her/his feelings through creative activities like drawing, painting reciting/writing poems/prose and drama etc.

**Key Learning Area : The World Around Me**

**Major Themes:** Significant features of natural and man-made environment; the non-living things/materials; time and space; significant features that make one proud of the country.

**Sub-themes**

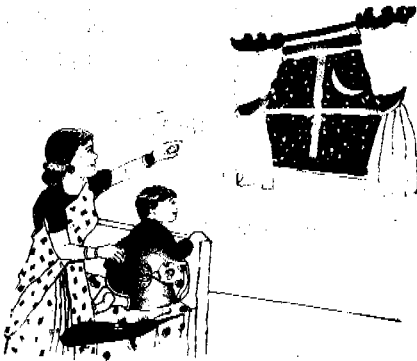
- The physical features and phenomena—The Earth, The Sun, The Moon, The Sky, Day and Night
- weather climate, land forms/soil—their characteristics and influence on human life
- The non-living things, materials, natural resources—their characteristics and role in human life and the need to protect them
- Time, continuity and change — significant developments in different fields over the time and their effects on human life
- I am an Indian

**ELOs: The child should**

- identify the natural phenomena and their relationships with ways of life of the people
- knows about the significant features of physical environment
- identify and know about the natural resources and understand the need for their proper utilisation, conservation and preservation
- demonstrate an understanding of distance in space and time and the relationship between the two
- demonstrate skills to experiment and find out the characteristics of materials
- develop skills related to taking care of the environment
- learn to live in harmony with nature
- show, concern and respect for the environment
- develop, awareness of and appreciate one's own culture and traditions and be proud of being an Indian

**Indicators**

Level I	Level II	Level III
<b>The child</b>		
<ul style="list-style-type: none"> <li>• identifies physical features in the surroundings such as hills, ponds, rivers etc.</li> <li>• identifies the sun, the moon, the stars in terms of their observable properties</li> </ul>	<ul style="list-style-type: none"> <li>• finds out how the earth looks (shape and concept—land and water masses)</li> <li>• collects stories about the persons who found that the earth is round, and shares it with peers</li> </ul>	<ul style="list-style-type: none"> <li>• identifies that the surface of the land masses has different forms such as hills, plains, plateau and deserts etc. and collects their pictures if possible</li> <li>• appreciates that the earth is the habitat of all living beings</li> </ul>



## Level I

## Level II

## Level III

- knows that the houses and other buildings have been made by human beings
- observe and finds out that various objects in the immediate environment are made up of a variety of materials such as clay, glass, metal, wood etc.
- differentiates between man made and natural environment in terms of observable properties
- experiments and finds out that some of the materials change their shape and properties when processed
- classifies materials on the basis of their properties; as solids and liquids
- handles, observes and identifies the soil as sandy, alluvial, clayey, rocky on the basis of its observable properties
- collects pictures of the earth taken from the space-ships
- finds out that the earth, the sun, the moon and the stars rotate on their axis or around each other and the durations differ
- identifies that day and nights are formed because of the earth's rotation on its axis
- records time of sunrise and sunset from newspaper, T.V. etc. and realises that the timings change over days/months
- identifies how the sun is important for life on the earth
- examines very simply in group discussions, how the man made environment and natural environment affect each other and also the life of human beings and reports in appropriate ways
- finds out the relationship between design and material used in buildings and the natural environment and natural resources
- finds out the uses of different materials in different fields and how they have changed the way of life of human beings
- differentiates between land and soil

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• describes daily weather using simple terms like cloudy, sunny or rainy</li> <li>• describes today's weather</li> <li>• plays 'dressups' to show the effects of weather on choice of clothing</li> <li>• identifies food items taken throughout the year and those taken at different times of the year</li> </ul>	<ul style="list-style-type: none"> <li>• prepares weekly/monthly weather charts in groups</li> <li>• differentiates between weather and climate</li> <li>• finds out from elders/teachers/reading books how different types of dress materials protect human beings from effects of climate</li> <li>• collect pictures/observes different types of dresses worn by people and prepares a scrap book or draws and colours them.</li> <li>• observes and records different seasonal variations in plants, trees, crops during the year, based on personal experiences</li> </ul>	<ul style="list-style-type: none"> <li>• investigates the formation of soil by weathering of earth materials</li> <li>• examines the local environment e.g. the school ground for signs of weathering and suggests ways of overcoming the problem</li> <li>• identifies some factors that lead to soil pollution such as use of pesticides and other chemicals and the need to protect the soil</li> <li>• identifies relationship between major types of soil and major crops</li> <li>• collects pictures of men/women wearing different dresses; different food items and prepares scrap books alongwith peers</li> <li>• infers that variety in dresses and food habits adds to the richness of the country's culture</li> <li>• identifies relationship between landform, climate and life of people such as food, clothing, occupations, festivals, types of shelter and cultural activities</li> </ul>

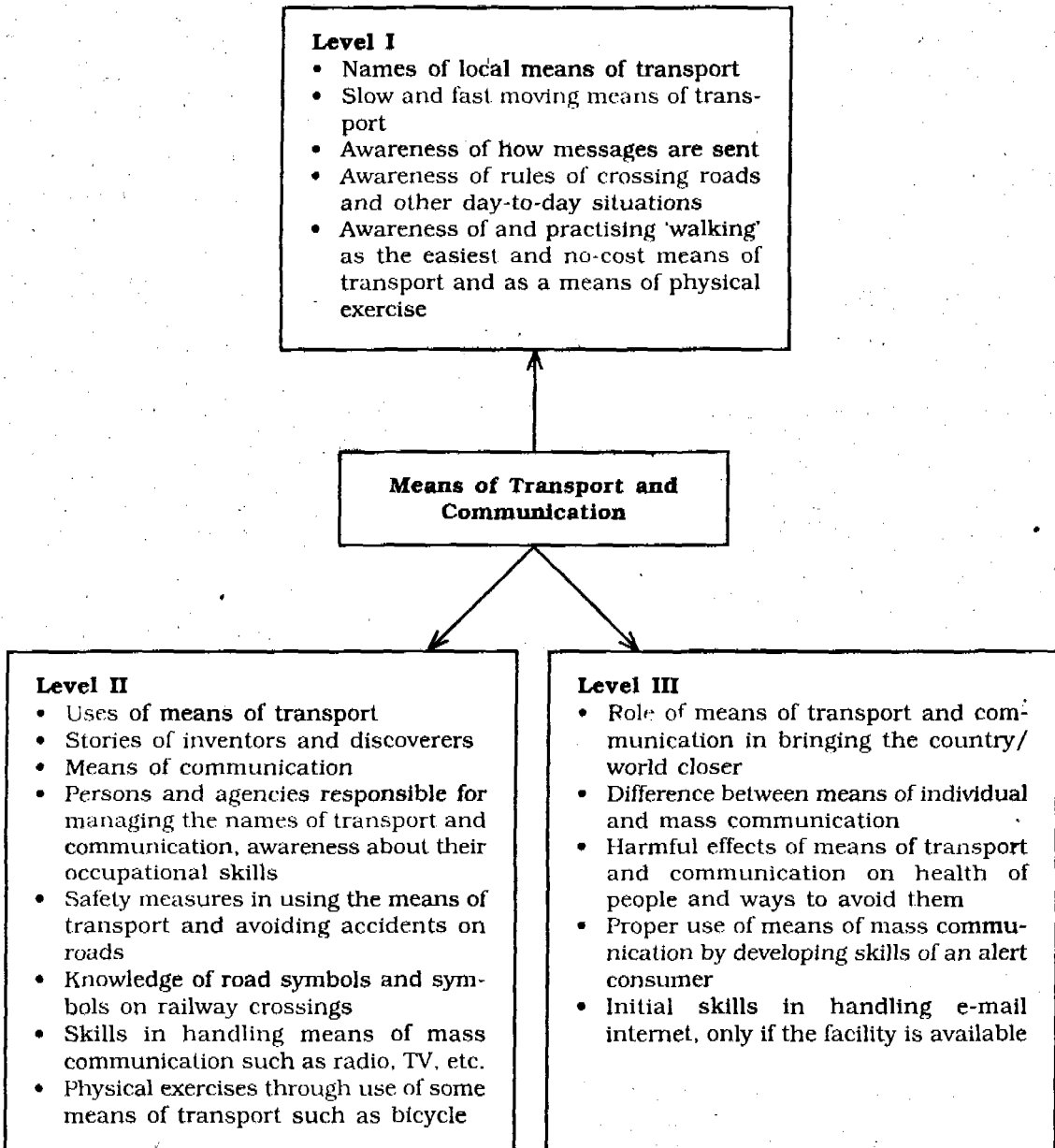
Level I	Level II	Level III
<ul style="list-style-type: none"> <li>identifies simple uses of water for human beings, plants and animals</li> </ul>	<ul style="list-style-type: none"> <li>finds out the natural sources of water and shares with peers in appropriate ways</li> <li>observes and records the three states of water</li> <li>demonstrates how the rainfall occurs through the story of a drop of water or in any other way</li> <li>cites examples of activities that lead to water pollution and role of every body to avoid it</li> </ul>	<ul style="list-style-type: none"> <li>collects information about how water is being used to create energy and electricity</li> <li>locates on the map the places where dams have been constructed and finds out their benefits</li> <li>visits some dam site, if possible, and shares the experience with classmates</li> <li>collects information about other sources of energy and the places they are found and locate them on the map</li> <li>compares renewable and non-renewable resources</li> <li>shows concern for limited, resources and the need to use them carefully</li> </ul>
<ul style="list-style-type: none"> <li>identifies the presence of air through simple activities like blowing</li> <li>develops habits like breathing through nose, covering nose/mouth while sneezing/coughing etc.</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates some properties of air through simple activities and shares the findings with peers</li> </ul>	<ul style="list-style-type: none"> <li>detects air pollution through simple activities (smell, feelings in the eyes, simple experiments)</li> <li>identifies some causes of air pollution and relates them to some common health problems</li> <li>develops habits to protect oneself from health problems related to polluted air (such as avoiding going in open places during storm, playing near roads, highways and industrial places emitting toxic gases).</li> </ul>

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• tries, listens and finds out ways in which air creates sounds (passing through trees whistling, blowing into pipe, playing a flute etc.)</li> <li>• differentiates between loud and soft, pleasant and unpleasant sounds</li> </ul>	<ul style="list-style-type: none"> <li>• differentiates between sounds created in handling/playing with different materials/instruments</li> <li>• identifies the sources of unpleasant sounds in the immediate environment and takes precautions not to create such sounds herself/himself and motivates others also not to do so</li> <li>• identifies harmful effects of persistent loud or sudden noise (such as lack of sleep, concentration, effects on the sick and the ears of individuals)</li> </ul>	<ul style="list-style-type: none"> <li>• cites examples from the natural phenomena to show that light travels faster than sound</li> <li>• recognises the musical instruments that function with the help of air and learns to play some of them, if possible</li> </ul>
<ul style="list-style-type: none"> <li>• classifies people according to age, sex</li> <li>• talks of personal experiences in terms of yesterday, today and tomorrow</li> <li>• uses the language of time</li> <li>• observes and describes sequence of events in a day, a week</li> <li>• recognises changes in oneself/others in the family in photographs taken at different times</li> <li>• observes changes in a plant over short and longer periods and reports changes</li> <li>• predicts next event (such as recognition of lunch time when food is being cooked)</li> </ul>	<ul style="list-style-type: none"> <li>• identifies similarities and differences in the lives of people of various generations (oneself, parents, grand-parents)</li> <li>• describes events on a calendar as taking place before or after each other</li> <li>• makes a calendar (group activity—week/month/year) and records significant events (such as class time table, birthday's, festivals, weather</li> <li>• draws a time line showing main events of own life</li> <li>• identifies somethings that change throughout people's lives and some that do not change (colour of eyes, name etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• reads and discusses stories describing the ways of life, beliefs and practices followed by men, women and children in the past</li> <li>• examines how the design of human shelter has changed over time and the reasons thereof</li> <li>• finds out about the discovery of fire, wheel and the changes that have come over time and how that has influenced the life of human beings from time to time</li> <li>• examines the changes that have come in our lives due to technological developments</li> </ul>

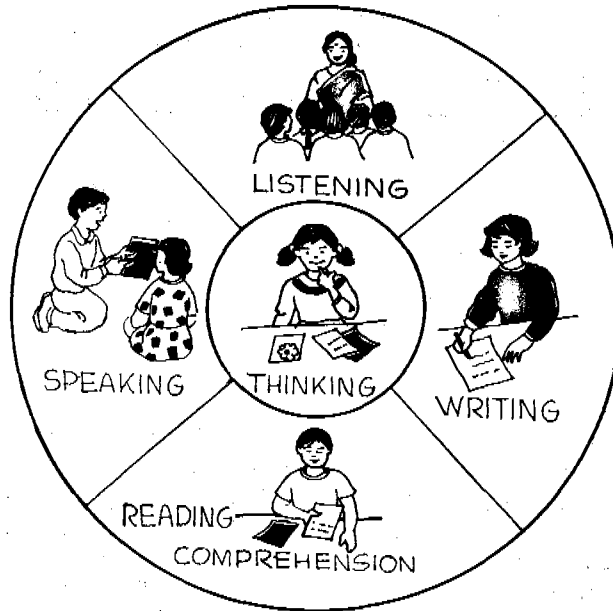


<i>Level I</i>	<i>Level II</i>	<i>Level III</i>
<ul style="list-style-type: none"> <li>• identifies the sequence of activities related to day and night</li> <li>• sequences three or four major events that took place within one school year using words like 'first', 'next', 'then', 'before', and 'after'</li> <li>• participates in singing national songs</li> </ul>	<ul style="list-style-type: none"> <li>• compares the old buildings, monuments with the ones constructed recently and records the difference</li> <li>• takes pride in participation in celebration of national days</li> <li>• reads and shares the stories of national leaders with peers</li> <li>• practices values followed by great men and women of the country and the world</li> <li>• respects people from all walks of life irrespective of their occupation, religion speaking different languages, eating different food and using different kinds of clothing</li> </ul>	<ul style="list-style-type: none"> <li>• examines the positive and negative effects of new discoveries in various fields (recreation, telecommunication, refrigeration, land clearing and transportation)</li> <li>• recreates/dramatises the life stories of great men and women, important events associated with the struggle for independence</li> <li>• realises that people from all over the country participated in struggle for independence and the process took several years.</li> <li>• infers that independence thus attained is invaluable and needs to be preserved</li> <li>• identifies the ways the people in different parts of the country are interdependent</li> <li>• appreciates the variety and richness in language, religions, classical music and dances, and historical monuments etc.</li> <li>• takes pride in being an Indian</li> </ul>

**Web Chart (Exemplar)**



3



## Teaching of Language

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## Introduction

**B**Y THE TIME a child comes into a formal school around the age of six years, she/he already has with her/him some competence in the language/languages which are spoken in and around her/his home. These early language experiences of the child are logically best suited to serve as the medium of early education since the child learns much faster and with greater ease and comprehension in a language she/he is already familiar with. In view of this universally accepted fact, the National Curriculum Framework (1992) clearly states that **the medium of instruction at the primary stage should be the mother tongue or the regional language.** It also prescribes the study of only **one language** i.e. the mother tongue/regional language at the primary stage. The idea is to enrich the competence of the child further in the same language that is the child's home language which, in turn, would facilitate all learning.

In this context it is necessary to clarify what is 'administratively' meant by 'mother tongue'. Most of the states in our country have been formed on the basis of language. Education being a state subject, the development of curriculum, syllabus and textbooks takes place at the state level. Hence in the educational system of any state, administrative language of the state which is used by a majority of people in the state in their daily life is defined as the 'mother tongue'. Therefore, in Orissa the mother tongue would be Oriya, in Tamil Nadu it would be Tamil and in Madhya Pradesh it would be Hindi and so on. At the same time it is also true that all major languages of our country have numerous dialects. This, in fact, is not the case only in our country. All the major languages of the world have their own regional dialects. But there is not much difference between their dialects and the standard language i.e. the State language. Hence, even if some people do not speak it they can understand the standard form of their language. For instance, if there is a fair in a

Brij or Bhojpuri speaking area where the shopkeepers or performers speak khari boli (or the standard form of Hindi), people/children do not experience any difficulty in understanding them. They can also follow radio and television programmes pitched in khari boli.

However, there are certain areas, mostly tribal, where the reach of the standard language is comparatively less. Thus in every state there are children whose home language is very different from the language of the state. In big cities there are numerous families who have come from different states of the country. The 'mother tongue' or home language of children from these families bears no direct relation to the language of the state.

It is worth noting that there is no fundamental difference between dialect and language. It is certain social and political situations that lead to a dialect being used in a geographical area becoming accepted as the standard form. It is then used for such collective purposes as administration, trade, education etc. However, for those who speak a dialect it suffices to fulfill the requirements of their daily life. From no point of view should a dialect be considered inferior. For example, classical literature which is available in the major dialects of Hindi is very important from the point of view of education and society.

If we consider the role of language in the curriculum, there is need to make a distinction between

- teaching of a language
- teaching in a language

And in both cases at the primary stage, the prescribed language is the mother tongue or the dominant regional language. **The proposed curriculum framework also supports the same view — but, with a difference.**

The 'difference' arises from the concern that, as discussed above, in a multi lingual country like ours, **can the decision to make the dominant language of the region the medium of instruction be really workable?** If we seriously take into account the wide variety of languages that abound in every nook and corner of our country we will realize that it is not always so. If we go by available records, India has as many as 1652 mother tongues which are spoken. Yet, there are only sixty-seven languages which are actually taught in Indian schools! Most of the mother tongues are not developed because of lack of their recognition and therefore lack of use outside a particular community and their homes. Therefore, these are not taught in formal educational institutions.

Since a large part of our country is, by and large, multi-ethnic and therefore multilingual, to what extent can textbooks be made in each of these

languages, and also when some of which do not even have a script? Besides, there are problems of availability of teachers speaking these languages, political motives of the local leaders, poor analysis of the problems etc. As a result, for a very large number of children in our country, their home language is actually different from the school language and they therefore, do not get to study in their mother tongue at all. In such situations, the goal of using the 'early language experiences' of the child as the medium of learning never gets realised. This situation therefore, leaves a very large number of children in our country not only illiterate in their own mother tongue or home language but also with low achievement levels in the dominant regional language itself and, because of that, in other curricular areas as well! There is, therefore, a need to approach the teaching of language for the different situations in the country in ways suited to each situation so that the child's new learning is based on what the child already has with her/him and not on its rejection.

What are these various language situations that we can identify in our country? Very broadly we may, for the sake of convenience, be able to group these under the following categories :

1. situations in which the child's home language is the same as the school language e.g. a Bangla speaking child going to a Bangla medium school.
2. situations in which the child's home language is similar to the school language but with some variations; for example, a child in U.P. may be speaking Bhojpuri or Awadhi at home but is expected to move on to 'standard Hindi' in school.
3. situations in which the home language is very different from the school language e.g. in tribal areas where even if 90% of children belong to a particular tribal community they are still required to study in the regional language, often through a teacher who also does not know their language. In this context, it would be interesting to know that in India there are as many as 400 tribal mother tongues.
4. situations, largely in the private schools or Kendriya Vidyalyayas, where children have to learn English as a subject from Class I onwards and also learn other subject through English without being exposed to it at home or in school. And, this becomes a deterrent to their learning.

This chapter attempts to deal with these various language situations in three parts.

The first part takes up the very first and most favourable situation where

the child has the opportunity to learn not only the mother tongue / home language but also through the home language. Mother tongue is defined here as the home language or the language that the child comes to school with. The assumption here is that the child has come to the school with some familiarity and competence in the language and the school programme should build on this early foundation and help the child move on further from there.

The second part addresses the other two situations where the school language and home language of the child are different. It discusses the possibilities for helping the child bridge the gap smoothly from the home language to the school language, while also nurturing the home language which is already with the child.

The third part deals with the teaching of English. This has been included for the primary stage in view of the evidently growing demand in the community for introduction of English at the primary level.

## SECTION I

### Teaching of Mother Tongue

#### Introduction

As we are all aware, a child's mother tongue is a natural expression of what the child is thinking and

experiencing. From the time the child is born, she/he gets exposed to the language being spoken by her/his parents and siblings. She/he hears this language in the neighbourhood, on the streets, and also over the radio and television, if the facility is available. The child thus learns to speak the same language that she/he hears in the environment. A small child looks at the world around her/him, associates names to objects and persons in the environment and starts to talk about them. In this way she/he begins to gradually construct her/his knowledge of the world around. And thus, as the child's store of language develops, so does the child's world grow and expand. This language that a child grows up with is known as the child's mother tongue.

**Mother tongue as defined here is, therefore, the language that the child already possesses before she/he enters primary school.** A child growing up in a normal environment has a vocabulary of about 1200-1500 words and possesses all of those basic sentence structures through which she/he makes sense of the language spoken in the immediate environment. She/he is also able to use the spoken language to convey, what she/he wants, to others.

In fact the teaching of mother tongue does not begin in school. It is only refined and carried forward in the school. Even when taught as a

subject in the school, the child basically learns to use the more developed forms of language, to acquire knowledge through reading, and learn to express her/his ideas and perceptions in diverse ways.

### **Language, Thoughts and Feelings**

As children grow, their language becomes more and more internalised. All the words used by them are not spoken out loud; instead, they give birth to more and more thoughts in their minds. In their imagination they can even talk with fairies or challenge the greatest athlete on the sports grounds! As they grow older, the proportion of words becoming internal will increase. Of all that they think, there is very little that they will be able to speak out aloud, but the 'rising and whirling' of imagination and ideas is absolutely essential for the development of the mind. Language is constantly generated in the minds of human beings in the form of thought. This language of thought has a vocabulary and grammar identical to spoken language, but its content is very different. A teacher can teach children what to say and how to say it, but it is impossible for her/him to teach them what to think.

Our thoughts, in turn, are governed by feelings and perceptions arising within us. But, as we are all aware, we have little control over our feelings and perceptions. The way the

particles of vapour above the clouds are invisible but, nevertheless, give birth to clouds, in the same way behind our invisible thoughts too lies a whole universe of feelings and perceptions which govern the thoughts in our mind and these in turn give rise to words in our brain.

If we wish to develop in children skills for expression in the mother tongue, it will not suffice for us to focus only on the external aspect of language. It is **essential to pay attention to what happens in the minds of children before they say or write something**. Thus, in order to strengthen expression in the mother tongue among children, it is even more crucial to address their feelings and thoughts.

### **Three Kinds of Skills in Mother Tongue**

We can broadly divide the skills of language usage in the following three categories :

- a. Mechanical skills
- b. Semi-mechanical skills
- c. Reflective and creative skills

Understanding the nature of these three types of skills and the differences between them will help us to develop these skills better among children.

#### **Mechanical skills**

If we ask a person to multiply 7 by



3, we know that the result can only be 21. If any other answer is given we will call it wrong. In language, too, there are aspects that can definitely be placed in categories of 'right' or 'wrong'. For example, recognising written symbols and reading them correctly is a mechanical skill. Writing words correctly too is such an area. Spelling mistakes can easily be identified and corrected. To a great extent, the area of grammar too comes under this category. If the children are using gender incorrectly, we can easily draw their attention towards this mistake. The area of pronunciation too is an area of mechanical skill to a large extent. Children's attention can easily be drawn towards mistakes in pronunciation. It is often felt that the mechanical skills should be emphasised in the primary classes because if there are shortcomings from the very beginning, it becomes difficult to remove them later. But the emphasis should be in a positive way by demonstrating the correct form and not by reprimanding the child or penalizing her/him for it.

### Semi-mechanical skills

In our daily life, when we listen, speak, read or write in any language, we do not pay attention to the enunciation of every single word, or its being written correctly or to the grammatical structure of our sentences. Language seems to flow



effortlessly from our lips or pen, in keeping with the context. This is possible only in the language we have practised from our childhood. **Semi-mechanical skills imply the skills involved can be defined as semi mechanical facility and fluency in comprehension and expression.** The development of oral semi-mechanical skills starts before the child enters the school. At home, children can quite easily understand at their level whatever is said by others, and can put across what they want to say quite fluently and even forcefully. On coming to school many children become hesitant in saying what is in their mind, since they often develop inhibitions. **It is, therefore, important to address this problem by helping children develop positive feelings about themselves and confidence in their own abilities.**

The practice of reading and writing takes place in the school. Semi-

mechanical skills in these areas would imply that children read and easily understand material of their level, and can express themselves through writing. These skills can develop with practice only. Hence it is essential to provide each child in the school with as many opportunities as possible to listen, speak, read and write the mother tongue.

### Reflective and creative skills

It would be more appropriate to term these as abilities rather than skills. Skills tend to have a greater element



of the physical, whereas abilities imply emphasis on the mental and emotional aspects. In the process of language teaching we should pay attention to the importance of being able to differentiate between fact and opinion. In any language, many **words tend to have different meanings for different people**, though limited within a range. Hence except in science and mathematics what they write reflects their own

thoughts. *Unfortunately our education system ends up communicating to children that in the various subjects taught, there are certain definite questions and definite answers — and that the children's job is to memorise the definite answers to those definite questions!* Good students are considered to be those who, even in higher classes, memorise the 'correct' answers and write them down in the answer-book in the examination hall. There probably is no better way of restricting the growth of children's intelligence and creativity.

From the very beginning, children should be encouraged to speak out their mind in their own way. It is only then that they will be able to develop the ability to think independently. From the very beginning emphasis should be laid on ensuring that children are not repeating verbatim what the book says or that they are not copying one another. Each child has a mind of her/his own, the development of which is one of the major objectives of education. A child's mind will develop only when she/he is given as many opportunities as possible to speak out in her/his own way in the mother tongue.

### Importance of Oral Language

In the first few years of the of life the child, development of both mind and language takes place through the oral use of language. During this stage of their life, it is oral language

that children use in order to understand their immediate environment, to relate with it, and to think in it.

It is the spoken form of language that is the basic form of language and despite all technological advancements, the importance of the oral form is increasing all the more, rather than decreasing. Not only in the classroom, but in normal conversation with one another as also in various conferences and meetings, it is the oral form of language that is used. With the expansion in television networks, the spoken form of language is reaching more and more people as compared to the written form.

At the primary stage, therefore, special attention should be paid to the development of oral skills — listening and speaking skills — because these have the greatest role to play in language learning. The more opportunities the children get to listen and speak, the faster they learn the language. In the education system of today, the oral form of language is being totally ignored. Teachers tend to feel that children already know how to speak, hence there is no need to develop it separately. The result is that children's oral expression does not become effective and this affects their written expression as well.

### **Reading — Its Meaning and Significance**

We have discussed above the oral

form of language. This does not imply that reading has become in any way less important. If we know today the thoughts and ideas of those who lived thousands of years before us, it is due to the written form of language. Recognizing the written symbols of any language and converting them into meaning is reading. Merely knowing the letters is not reading. Reading is an art, a habit. When children begin to take pleasure in reading they are always able to obtain material in accordance with their own interest. If they do not develop the ability and interest in reading, they may become literate but are not good readers.

### **Why is the Development of Reading Skills Important?**

To a great extent, the mental and emotional development of children depends on the development of the ability to read. The more they read the more their vocabulary and the power to use words grows, with the result that their ability to comprehend increases. The more this happens, the better they are able to speak, the better they are able to write.

It can perhaps be said that the practical form in which education manifests itself is through reading. Reading books, newspapers, magazines, announcements, notices, greeting cards etc. are the practical

forms of reading. The development of the ability to comprehend written language enables children to understand concepts in other areas.

The success of reading is when the child reads and understands as well as understands and reads.

### ***The Importance of Writing***

Three aspects are included in the ability to write — written symbols, spelling and composition. The first is related to the manner in which letters are written, or character formation. Spelling is related to how letters are used in words, while composition has to do with grammatical structure as well as the movement from controlled composition to free composition. A child can express her/his feelings and ideas through writing. In daily life too writing is useful in tasks such as writing letters, filling in a money order form, preparing a shopping list, sending messages to others, and so on.

It is only through the written form that the knowledge and experience of one generation of human beings can be carried forward to the next generation. Writing skills are related to the needs of day to day living.

### ***Present Concerns in Language Teaching***

Let us take a look at what the present

situation of language teaching at primary stage is generally like across the country.

- A large number of children coming to school are *first generation learners*. In the absence of a stimulating and educational environment at home, they generally come into school without having developed the *necessary readiness* for learning to read and write. Often they may not be interested in education itself. A majority of these children do not get the benefit of a sound *Early Childhood Education* either. Once they come into school also, no activities are undertaken to generate in them any interest or readiness for learning to read and write. From day one they are compelled to begin on formal reading and writing. The consequence is that they face difficulties in their learning and lose interest in studies.
- Our education system has always *ignored the oral aspect of language*. There are two main reasons for this. One, teachers tend to feel that there is no need to focus on spoken language separately, as children already know how to speak. Two, from the very beginning, our examination system focuses on evaluating children in the written mode, as a result of which we do not pay attention to the oral form at all.

- We know that each child is unique and that her/his pace of learning may be different from others. Some children learn faster, some slowly. *But an effort is made in the classroom to teach all children at the same pace.* Some children do get to learn, and some are left behind. They move on from one class to another without having learnt what they need to in that class (particularly as a result of the no-detention policy).
- By and large the *focus in the classroom is on completing the lessons in the textbook.* Teachers are under pressure to complete the syllabus in the prescribed time and it becomes difficult for them to determine what each child has learnt and to what extent.
- *No activities are undertaken for the development of creative and imaginative faculties among children.* Even for composition, a few topics are identified by teachers with whose help children are made to write a few sentences. Children are not encouraged to write independently on their own, nor are they provided opportunities for written or oral expression on topics of their interest. Consequently, creative faculties do not get nurtured. Often their expression is limited to repeating whatever has been learnt by rote memory.
- Other than the textbook, children are not encouraged to read any children's literature, nor is any material available for them to read. This results in children not developing any interest in reading, and their vocabulary too does not grow.

### Major Questions

In view of the above concerns some of the major questions addressed in the following pages are:

- What do we expect in terms of mother tongue development from children who complete primary education?
- What are the specific objectives for mother tongue teaching at the different levels of primary education?
- What should be the process of mother tongue teaching at every level? In what ways are the methods suggested here for mother tongue teaching different from the traditional methods used?
- What should the teaching-learning material be like?
- What should be the nature and method for assessing progress in the development of mother tongue abilities?

### Vision of the

In view of what has been discussed above, let us look at what we expect

from the child in terms of development of skills and abilities in mother tongue by the time a child completes the primary education stage.

It is expected that a child would be able to

- use the mother tongue for effective communication in daily life
- take pleasure in reading and listening to what is of interest to her/him and increase her/his level of information.
- think independently
- use language creatively.

The proposed curriculum framework has been developed keeping these objectives in mind. Let us take a look at some of the **major features** of this framework:

- It gives sufficient space to the language abilities related to readiness that are to be developed at the pre-school level and should form an essential part of the primary curriculum.
- The expected language abilities have been identified at three levels, as suggested in the document to take care of the difference in pace of learning by different children.

**Level 1** introduces the skills of listening, speaking, reading and writing after ensuring readiness for these skills. **Level 2** carries these abilities forward, but at a higher difficulty level than that of

level 1. **Level 3** contains suggestions towards the consolidation and enrichment of all these language abilities.

- With a view to develop creative abilities and imagination amongst children, it emphasises independent thinking and writing. Language is not being looked upon only as a tool of communication but as a powerful medium for children's feelings, thoughts and expression.
- It spells out in detail the different methods of teaching-learning, and relates the process of learning language to life.
- It emphasises the development in children of the ability to distinguish between fact and opinion.
- It lays special emphasis on the development of reading comprehension ability because reading helps in enhancing the vocabulary, acquiring new information and understanding concepts in other subjects.

### Level-wise Expected Learning Outcomes

#### Readiness for Learning To Read and Write

*Before introducing reading and writing to children it is necessary to first ensure that the child has developed*

- interest in learning to read and write by seeing its relevance in daily life
- some basic vocabulary and

expression in that language

- ability to discriminate beginning and end sounds of words
- ability to relate sounds to pictures, words etc.
- a sense of directionality i.e. moving while writing from left to write or in any direction, depending on the direction typical of the language to be learnt
- adequate eye-hand coordination to be able to hold and control the pencil properly

*A good Early Childhood Programme should be able to help children develop this readiness. However, many children in our country do not get this opportunity, either because they come directly to the primary school, or even if they go to a preschool, the quality of the programme is not always very good. It is, therefore, necessary to ensure this at the beginning of level 1 through a good school readiness programme.*

## Level I

**A child should, by the end of Level I, be able to**

### **Listening and Speaking**

- listen to and understand the language spoken around her/him
- listen with understanding and pleasure to short, simple poems, stories, descriptions, dialogues, conversation etc. and get the main ideas in them
- express herself/himself confi-

dently while participating in conversations, discussions etc. at a very simple level

- ask questions with confidence
- solve simple riddles and play language games
- use courteous and respectful language
- listen to others attentively and wait for one's own turn
- recite simple rhymes and poems and participate actively in group songs
- role play situations and stories using dialogues.

### **Reading**

- recognize and discriminate different sounds and relate these to pictures, shapes, symbols, words etc
- develop the habit of reading from left to right and top to bottom (depending on the direction of the script of the language)
- read pictures, recognise and read familiar words, sentences, poems etc
- read with understanding and enjoy simple poems, stories, dialogues, descriptions etc.

### **Writing**

- feel the need to learn to write and enjoy writing on her/his own

- demonstrate adequate eye-hand coordination while drawing, tracing, copying forms, shapes etc
- write short and simple words and sentences on her/his own
- write a few sentences on a familiar topic with the guidance of the teacher, if necessary.

### Grammar

- know the opposites of simple adjectives and nouns
- use simple punctuation marks like comma, full stop, question mark etc.

**The above mentioned abilities are basic to all the three levels and are therefore not being repeated. However, the complexity of the tasks/activities for these will increase appropriately for each level.**

### Level II

In addition to the skills/abilities at Level I, at Level II the child should be able to

### Listening and Speaking

- take part in debates, discussions in the class, in *bal sabhas* etc.
- answer specific questions on content/material that has been heard
- use language in a context-specific and person-specific manner in

both formal and informal situations

- narrate stories, recite poems, describe events etc with correct pronunciation and action, expression and gestures
- answer open ended questions e.g. what will happen if.....using her/his creativity and imagination
- begin to understand difference between fact and opinion.

### Reading

- read simple text with comprehension and understanding
- read aloud with correct pronunciation, emphasis and fluency
- read various kinds of material e.g. notices, traffic signs, advertisements, stories, simple essays, newspaper, children's magazines etc
- read other's handwriting
- read silently
- consult the dictionary.

### Writing

- write clearly, correctly and legibly using punctuation marks appropriately
- take dictation
- write short compositions on a topic of one's choice, description of events experiences on her/his own with interest and pleasure



## **Grammar**

- identify broadly on the basis of use, different parts of speech e.g. pronouns, adjectives, adverbs, subject, predicate etc
- identify synonyms and antonyms and use them appropriately.

### **Level III**

By the end of level III the child should be able to :

### **Listening and Speaking**

- speak fluently in the standard form of the mother tongue
- speak to strangers with confidence
- speak with confidence for two to three minutes on a topic appropriate to her/his level
- participate in language games of varied nature
- organise 'Bal Sabhas', formally welcome a guest, offer thanks etc.
- participate in an elocution/declamation on a simple topic with confidence.

### **Reading**

- consult a dictionary
- read with understanding and interest poems, stories, travelogues, letters, one act plays, simple essays
- develop the habit of reading for joy.

## **Writing**

- write an application for leave
- write one's own experiences, descriptions
- write short stories using her/his imagination
- take pleasure in writing.

## **Grammar**

- understand prefix and suffix, simple and compound sentences, punctuation marks such as colon, semi-colon etc.

### **What should Mother Tongue Teaching be Like?**

#### **Relating teaching to child's daily life experiences**

While fostering the development of language abilities of children it should be borne in mind that they are not being developed from scratch and should be based on themes related to their life and environment. The themes that are of interest to children are the ones that have the greatest potential for language usage. Content should be prepared around themes such as animals in the environment, occupations, fruits and flowers, seasons, natural objects (such as the sun, the moon, rivers, hills, waterfalls etc.).

In all the activities planned for children a variety of examples from daily life should be selected so that

children's vocabulary grows and their speaking ability develops. *Children should get sufficient opportunities to speak and listen in the school through a range of activities.* Discussions and debates around familiar topics can be initiated. There should be dramatisation of short and simple stories. Children should get opportunities to speak on any incident from their own experience. The teacher should narrate stories, etc. Children can be asked the names of objects when their pictures are shown. Their attention should also be drawn to the written name of the object. Children can be encouraged to describe various kinds of scenes or even develop stories individually and collectively.

### Setting up a Language Learning Corner

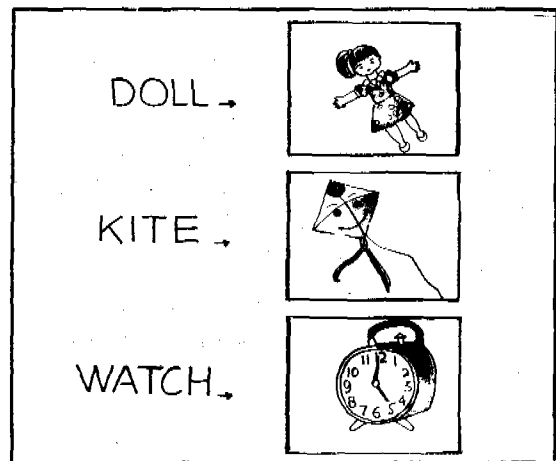
If a 'Language Learning Corner' can be fixed in the classroom, it will be of great use and interest to children. In this corner reading and writing material should be displayed according to the interests and age of the children concerned. For example, different kinds of *pictures, such as fruits, flowers, vegetables, action pictures, animals, various kinds of children's books, magazines* can be arranged in this corner. *Library books provided under Operation Blackboard* can also be included. Children should be encouraged to pick up and

read whatever is of interest to them. If reading material cannot be made available in the school, children should be encouraged to bring old children's magazines to class from their own or friend's homes, and these should be kept in the classroom. Short stories, poems and pictures produced by children should be displayed as their literary creations in the language corner. This would help increase their enthusiasm and develop their creative abilities.

### Methodology of Teaching Language

It is important to adopt an easy and interesting methodology for teaching of reading and writing so that children get interested and learn faster. Two tried out methods are discussed below :

1. Word method
2. Whole language development method



Let us take a look at both these methods.

### **Word Method**

In the word method children are familiarised with the picture of a known object and then the written word related to it is introduced. They are able to understand this on the basis of their prior knowledge. Then each letter occurring in the word is introduced.

Some scholars believe that the word method leads to meaningful reading. The burden of memorisation is reduced because words are taken from the child's vocabulary and being familiar, children are able to learn to read them with ease. The familiarity and meaning helps children experience joy in learning. In this approach children move from known (word) to unknown (letter), from the whole (word) to the part (letter).

### **Whole Language Development Method**

In this method children are taught reading and writing through the descriptions of events, stories or of experiences from daily life. It is a fact that children are already familiar with language usage. At home they listen to adults talking among themselves. They might even see them writing or reading a little (especially in those homes where the parents are literate), see in the written forms the

names of shops in the market, names of roads, advertisements, etc. They understand that these written messages carry some meaning. Therefore, their mind already contains the concept of reading and writing.

*This pre-knowledge is the basis on which classroom activities are organised.* Since it is a sentence that is a meaningful unit of language, the children are presented with a meaningful use of language and their attention is drawn towards the whole description. The learning process is based on meaningful communication (oral and written). Great emphasis is laid on the child's expression. Children are encouraged to learn through interaction with classmates. Using story telling as a medium, children are taken from the whole to the part or, in other words, from the sentence to the word, and from the word to the alphabet. This method has been found to be very interesting and more natural from the point of view of language learning.

This approach is however not seen often being used in the classrooms. To implement this approach there is a need to provide a *very comfortable, secure and natural environment* in the classroom. Children by their very nature are interested in listening and narrating, and through this process they get acquainted with sentences. *They experience for themselves the need to become literate.* The teacher

organises the learning environment in such a way that children evaluate themselves and find out when they are right or wrong. Language is, thus, developed in its total form. In this approach there is no definite sequence among the competencies of reading and writing. Children are encouraged to select their activities according to their own interest and they are provided all possible opportunities to undertake as many language exercises as possible. For example, reading an advertisement, reading the map of the locality, finding out the rules for crossing the road and following them, making a list of things needed, making charts, having conversation over an experience, singing songs of one's interest, etc. are some possible activities.

Despite numerous advantages, the experience of many teachers has been that this methodology presents a few *difficulties*. If the number of children in the class is large, organising and managing them properly becomes difficult. Also, if children's errors are not corrected at the initial stage they keep on repeating them.

An ideal classroom environment would perhaps be one which blends the more useful aspects of both the methods. With children having different learning styles, one child might learn better from the word method while another may find it necessary to have more direct recognition of the alphabet. **Keeping in**

**mind the different learning paces and styles among children, a combination of methods would cater better to the needs of all children.**

**To learn a language well a child should**

- feel the need to learn it
- get a lot of encouragement while learning it
- get a variety of opportunities to learn it and use it
- find meaning in what is being learnt
- experience joy and satisfaction in the process of learning it

**A good language teaching approach caters to all these needs.**

**Teaching Grammar Through Use**

Grammar is considered to be the most uninteresting area of language learning. The reason for this is the way in which it is taught in the schools. We have discussed earlier the close relationship between language and mind. Accordingly, the study of grammar should actually lead us to an understanding of how our mind functions. But we reduce grammar to merely getting children to memorise a few definitions and evaluate them on it. This leads to children losing interest in grammar from the very beginning and they are able to read only that much of grammar as will suffice for the examina-

tion, and that too is often done just before the examination!

In reality, the child begins to pick up the basic grammar of the mother tongue from the very beginning. It is also true that if the child does not study grammar formally this will not create any special barrier in the use of language. Yet, there might be a few occasions when a technical vocabulary might be needed. For example, if the correctness of some language spoken or written has to be assessed, we need to know a great many grammatical words such as sentence, subject, verb, masculine, feminine, past tense, etc. to be able to discuss and analyse. If grammar is taught emphasising this practical aspect of language, it will no more seem uninteresting to students. Instead, children may find it a useful activity.

At the same time, through the analysis of language, children will also begin to understand the relationship between language and thought better. For example, some of the interesting examples given below can easily be explained to a class V child:

*We can say the same thing in one or more than one sentences. "There was a poor farmer. He had a cow. He looked after his cow with great love." What these three sentences contain can quite accurately be said in one sentence "a poor farmer had a cow who he looked after with great love."*

Both these examples say exactly the same thing. Children get to know from this that meaning in language does not depend on the number of sentences or words, nor is it necessary that there is greater meaning in one who speaks more. We can count the number of words, but we cannot measure meaning. When we listen to others, it is only words that come to us and it is we who give them meaning. Hence it is necessary to listen to others carefully.

What is most important is that children should be given full freedom to say what they want to say and in the way in which they want to say it. All that teachers have to see is that they use their language effectively in consistence with grammar and courtesy. It is not necessary that what children say should agree with what the book or the teacher says. Children should not be asked to memorise and repeat others' words.

These are only a few examples which should make it clear that instead of being boring the study of grammar can be interesting and useful and that it can help in the mental development of children. In fact, Indian thought starts with an analysis of language and understanding the limits of language. Ancient Indian thinkers have said that if we understand the mystery of language we will know the mystery of creation itself. The first step towards understanding this

serious thought can be in primary classes itself through interesting analysis of language.

### **How are Oral Skills Developed?**

Keeping in mind the above points and the existing requirements, the first task of the teacher is to create such situations in the classroom as motivate the children to speak. This is not as easy as it might appear at first glance. In the normal course of events, in the name of speaking-listening activities children are made to speak out some known/evident facts. (For example: *What is this? A mango? What is its colour? Yellow?*) In such a situation children do not have to think much on their own or create anything in their mind. The net result is that language abilities do not really develop.

The teacher will have to search for contexts where children feel the need to think, speak, express their response. For this need to be felt it is important that children get the opportunity to think on their own or communicate meaningfully, based on their interests and inclinations. It is only when children work in such circumstances that we can give these activities the label of language teaching or activities leading to language development. On such occasions our emphasis should not be on the correctness of language used

but on **active participation by every child with confidence** in the oral language activity, be it a conversation, a discussion or debate.

Providing children a **democratic environment** in the class and **opportunities for interaction with their peers as also with the teacher**, not only in the language class but also in other areas, is important for motivating children to participate. The atmosphere of the classroom should be lively. Children should not only be listening to the teacher but speaking out freely. If the teacher communicates with children, expects them to answer her/his questions, then children will not only listen to her/him carefully but will also be eager to speak. **Before children can speak correctly it is important that they rid themselves of the natural hesitation that many of them have in the classroom situation.** Hence, without making errors an issue, children should be provided opportunities to speak a great deal. *Too much of emphasis pointing out mistakes is very likely to reduce their motivation to do anything at all!* This applies to writing as well. Before children can write correctly it is necessary that they start writing even if it is make-believe writing. The focus on removing errors should come only when children are writing without hesitation or reluctance.

Mother tongue education should not be restricted only to learning mother

tongue. There should always be scope in textbooks for discussion on varied topics related to life outside the school. For example, if there has been heavy rain or too little of it, discussion on how this is affecting the life of children should be seen as part of mother tongue education. Children's attention should be drawn to whatever is happening in the life of the village or city that is new and discussions held on it.

*How else can language development be facilitated, with reference to thinking and oral skills?*

Activities involving *objects, pictures, discussions* (on events, processes, experiences, or what has been imagined), varied forms (such as stories, poems, riddles) and *role play* can be both enjoyable and useful for this purpose.

When children *create* something (picture or clay models) or *perform* certain actions (sorting out a knotted rope, or solving a problem along with friends) they are continuously using language meaningfully and developing their language and thinking abilities on their own.

### **Using Pictures**

If we show children the picture of a cow or a house, there might be a little response. But if we show a house with a cow standing on top of it, children will immediately start speaking; there will be curiosity to

think or find out how the cow got on to the top and what will happen now.

It is not necessary that all responses can be generated only through fantasy. If there is someone standing on a chair and screaming, with a snake hissing on the floor below, that too will lead to thinking-speaking. Can you guess why?

It is clear that pictures which arouse interest and curiosity do provoke children to speak. With a little effort a teacher can convert a mere object/picture into an interesting trigger for speaking. Take the same picture of a mango. It is a challenge for the teacher to ask such questions as get children to think and even lead to different answers from different children. For instance, what are all the things that are made from mango? How many mangoes can fit into my palm? (If children say — it depends on the mango, how big or small it is — please note that they are thinking on their own and using spoken language!)

If the mango falls, what kind of sound will it make? And what kind of sound will it make if it falls on sandy ground, or on water? And now comes the most provocative question, if this mango were to fall on a dog sitting below, what sound shall we hear, and what sight shall we see? Can you work out for yourself how the other activities suggested can make language learning process more possible and interesting?

## How to Teach Reading

Mere recognition of sounds is not enough to get the meaning out of a text. Recognition of written words and understanding their meaning is equally important. Hence, it is necessary to develop the skills of reading for which the children need to be exposed to a variety of written material

- that is interesting and meaningful to them
- whose meaning is already well known to them (some well-liked poem or story, etc.)
- which has a pattern, in which orally known vocabulary is repeated a few times. If the same sounds and letters are in sufficient 'quantity' the possibility of their being recognised by the child becomes greater.

### There can be more than one functional way of teaching reading.

Without emphasising one special method, a process of teaching reading is being shared here that is in consonance with the principles of language learning that have been given here, and emerges naturally from them.

### A step-wise strategy for teaching reading

- Enable children to become familiar with the kind of material mentioned above

- Present the written form of this material to children
- Enable children to recognise units of meaning from the written form of this language, such as sentences or words
- From the recognised units (such as words), lead them on to recognition of individual letters based on similar sounds and shapes occurring in the written text
- Start putting together identified letters to form words, so that children can understand how words are composed of different sounds together and how letters come together to lead up to words.

It is worth noting that this need not be done with every single letter of the alphabet. Children have greater difficulty in the beginning because they are moving from pictures to symbols. When a line drawing or a stick figure is inverted, its "meaning" does not change, it remains the same. But when the symbol for a letter is inverted, it is no more that letter. Children take some time to understand this. Once children understand that specific shapes have specific sounds associated with them, they can progress very fast in learning to read. On many occasions it is enough to say what a specific shape is called.

The recognition of vowel symbols (matras) too, takes place in much



the same manner. When children recognise two words then they learn to distinguish between the two and move towards learning to read the matras.

At this point, the presence of *good reading material and an encouraging atmosphere* are very crucial for children. The material should be such that in addition to being interesting it should provide greater possibility of being guessed correctly by children, to get to the correct meaning. This will enhance reading abilities greatly.

### **How to Teach Writing**

While children use their eyes and brain in reading, in the case of writing, their eyes and brain need to work in coordination with their hands. Before children come to school they do actions with their hands such as eating, playing with their toys, putting on their clothes, etc. If they are given wet clay to model into various shapes and toys, this enables the finer muscles of their hands to develop. They can also be asked to do free drawing, make patterns and so on. Whatever shape, pattern or picture that children make, they try to see some meaning in it. In the beginning children will find it difficult to write the curving letters of the alphabet and need to be provided some readiness activities and experiences involving

eye-hand coordination before actually starting on writing.

To begin with, children should be asked to draw pictures of their own interest. It is not necessary that children should colour these pictures. Ask them to draw a few simple shapes (circle, triangle, rectangle, semi-circle, etc.). Then move on to horizontal, vertical, sloping lines. e.g. a horizontal line followed by a vertical line, or a horizontal line atop a vertical line etc.

Gradually children should be presented appropriate and familiar material. In this material pictures can be used to draw children's attention to words that would be meaningful to them. Then the words can be used to lead on to letters and also to explain the relationship between the shape and sound of the letter. When children are able to recognise at least three-four letters, then only they should be expected to do formal writing. We can also give them a few pictures and encourage children to make an effort to write their names. They should also practise tracing or copying words. Gradually they can be encouraged to write small sentences on their own.

Children **should not be discouraged** even if they commit errors. Before learning to write correctly, children should at least begin to get interested in writing and in fact even take

pleasure in writing. If there are errors, the correct form of the words or sentences should be presented before them. This generates in them the ability to correct themselves. But they should not be scolded or demotivated.

Children can be given the task of looking at a picture and writing words/sentences related to it. Similarly, a sequence of pictures can be given and children can be asked to write more than one sentence. In the same way, a few words or symbols can be given and children asked to develop these into a story, or an event.

In Levels II and III, in order to develop **creative and imaginative abilities**, there should be a special emphasis on free writing. Children can be given a topic of interest to them and asked to write a story, description, conversation etc. While conducting this activity it needs to be borne in mind that there should be emphasis on providing opportunity for developing creative thinking and imagination of every child. There can be one topic for the whole class but the teacher must remember that everyone's perception will be different, leading to different expressions. The teacher should not pre-determine one type of expression with a fixed sentence-sequence. This hurts the feelings and expression of children, and hinders rather than helping

their language development. As has been said before, mother tongue is the expression of children's minds, and the most fundamental basis of their education.

### ***Learning Through Use***

Because a major aspect of language is in terms of skills, this aspect emerges as important during the learning of language as well. In much the same way as any skill such as riding a bicycle or drawing is learnt by doing it oneself and practising it, in the learning of language too it is necessary to give children opportunities for using language. As against this we generally find that, in the classroom, children are asked either to keep quiet or are asked to copy spoken or written language as used by the teacher. In both the situations, children are not using language on their own and this obstructs their learning.

### ***'Meaningful' Language***

One important characteristic of language is that it is always meaningful and relevant for the person using it, or it would not get used. If we ask some one to speak, she/he might say, what should I speak? That is, for what objective should I speak? Usually we use oral or written language only to fulfill some objective. But when efforts are made to teach language in the classroom, children

are asked to do a number of things without it being seen whether it is meaningful or purposeful for them. As against it, it is essential that children get opportunities in the classroom to use language that is **purposeful** and **meaningful** to them. This is important since, as emphasized earlier too, there is a strong relationship between language, thought and feeling.

### ***How does Language Capture Meaning?***

If we come in contact with some unknown language we try to guess what it is that is sought to be communicated to us. We try to find meaning by looking carefully at the speaker's expressions, gestures, intonation of the voice and use our knowledge of the context at the moment to understand what is being communicated. In other words we use the **whole context** to derive meaning.

If the unknown language is in written form, we turn around the material looking for clues, or look at anything near the material that might give a hint. We might find that a picture of the place at which it is written/located (e.g. a poster or a sign board) might tell us what it is saying. That is, once again we are in search for a context which will enable us to guess the meaning correctly.

We do this because in our language it is not only words that are used; it is the specific relationships between the words used and the circumstances/situations/contexts in which they are being used that determine what the words mean at that moment.

From the point of view of language learning, it is important to understand the following aspects of 'context' :

- We understand the meaning of any word (but especially new words) on the basis of words used before and after it, that is, from its context.
- Often, the context can change the meaning of a sentence. For example, if in a restaurant someone says, "The chair is vacant" we can understand that we may now sit down to eat; however, if a minister has resigned and it is said, "The chair is vacant", we will understand something different altogether.
- For the same objective, we may use different words or sentences in different contexts. For example, the words with which we request for something will depend on who we are asking from, whether from a little child or from our mother or an elder.

Thus it can be said that one objective of language learning is that children learn to derive meaning

from the context and they also learn to use context-specific language.

### **Context in Written and Spoken Language**

Where the language of children is different from the language of the school, the expressions, actions, gestures and the voice modulation used by the teacher become very important in enhancing communication in standard language, because they enhance the context and hence increase the possibility of it being understood. Hence, it is also an objective of the development of spoken language that children should develop in themselves these aspects that are specific to context.

We use many ways of indicating something when using spoken language because what we speak is accompanied by non-verbal cues of communication like gestures, expressions etc. When we move towards written language we find that it is not enough to say "The chair is vacant." We have to indicate whether we are talking of the restaurant or someone's resignation, etc. etc. That is to say, we have to recreate that entire context which was very naturally a part of the situation when we used spoken language. Also, instead of the modulation of our voice, we are now using punctuation marks.

When children are presented with written material, it **becomes important that all the means which**

**enhance context are brought into use.** Also, while teaching writing, it is important to understand that children too have to learn how to bring context into the use of written language.

### **Proposed Teaching-learning Materials**

In the language Readers of Level 1, themes can be chosen from areas such as home, family, games, fairs, festivals, market, animals and birds, simple songs and stories.

In Levels II and III, themes for Readers can be from areas such as monuments and sight-seeing places, journeys, zoo, the life of children from other states, discoveries, scientific inventions, lives of great persons, stories, poems, letters, historical events, simple essays and so on.

### **Some Learning Aids for Development of Language**

In the development of language the role of teaching-learning material is to encourage the flow of language in the child's mind. The material should not be such that will only promote development of mechanical skills but should also serve to enhance skills related to creative use of language. Because language is not only in print form, material for language teaching too should not be only in this form.

This concept throws open a whole treasure of opportunities for us —

because any ordinary object, picture, event, experience or written/printed material can contribute greatly to the development of language. A few suggestions are given below, but teachers can, of course, think of so many more possibilities than what are given here.

### Objects

Interesting conversations and descriptions are possible with different kinds of objects. e.g. an activity like 'show and tell' is a very creative activity wherein children can be asked to say whatever they like about any given object. Children can be asked to make pictures of the objects or make patterns or toys from them which will foster development of creativity and reflection in children.

### Pictures, Charts and Cards

A great deal can be done in the class with shape-, letter- and word- (or

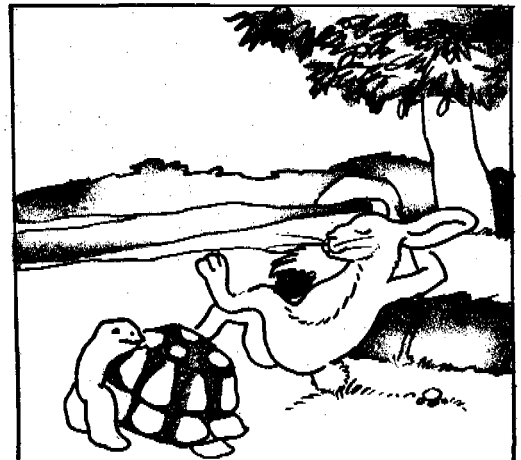


word-picture) cards. Though the kind of charts that are seen in typical classrooms are often very limited in scope, the teacher can, if she wants, do many interesting activities from them wherein children are required to think on their own.

Many types of pictures can be helpful in the language classroom. Pictures of familiar objects, animals etc. are especially useful for activities involving classification, identifying relationships, learning to read, etc. To get children to loosen up and to get rid of inhibition as well as to think, action pictures are the best e.g. picture of someone standing on a chair with a frog below. Pictures that have a lot of detail, e.g. a market or a mela, are fascinating for children, and lead to development of skills of observation and use of spoken language.

### Events, Processes, Experiences

These are not normally given the



status of 'material' but these are very important for the development of many language skills such as using sentences in a sequence, creating a story collectively, making a description interesting in accordance with the audience and so on. This leads children far beyond mechanical skills into the realm of creativity.

### Written-printed Material

In addition to pictures, cards and charts, teachers can also make use of sections from newspapers, children's magazines etc. In older classes, children's creations might also be interesting material for other children (e.g. in the form of wall paper, children's newspaper, etc.).

Textbooks and supplementary material are the commonly available material, but they too seem to have many limitations. It is not necessary that teachers should only confine their activities to these. If they want they can surely find more creative uses of these materials.

Library books are now becoming available in some schools. Unfortunately they are not used for fear that the books might tear off or get lost. It is important to understand that torn books have been more useful than books that have never been opened. Where teachers are actually making use of their libraries, it is not necessary to keep the library activities confined to the reading of

books—there can be discussions, writing/ drawing activities, role play, quizzes etc. related to the books particularly at the stage of Level 3. Where facilities permit, class libraries can be very useful since they make books more easily accessible to children. These also allow for more flexibility in access to children as and when they like, since all children may not be in the mood to read at the same time.

### Some Aspects related to the Use of Material

Material can be of many kinds: collected from the environment, created by teachers and children or supplied by the department.

There is a great need for variety in the material and its uses. There is also need for

- *variety in the process or method that is being applied with the material*
- *the kind of objectives for the fulfillment of which it is being utilised,*
- *and the kind of language usage it is giving rise to.*

It is important to bear in mind the level and experience base of children while using the material.

Often material is used simply for the sake of using material, because it is expected of the teacher. But it is important to realise that without any learning objective in mind the use of material could be meaningless.

Material can be used not only in enabling learning but also in assessing learning. Material brings with it the aspect of management of material. How it should be acquired, distributed, stored — all this is a challenge for the teacher and needs prior planning.

### **Cross-curricular Linkages, from the Language Point of View**

In the first two years of primary education particularly, there are many activities conducted with children which would be difficult to classify in terms of the curricular area they belong to. For example, classification, relational concepts, discussing experiences, making models with clay or other objects and many such activities have relevance across different curricular areas. In other words, many aspects of other subjects are part of language learning and in every activity performed in other subjects language skills are always involved.

In higher classes the role of language in other subjects becomes more specific in nature. In mathematics it becomes more oriented to symbols and definitions, a kind of language in which the possibility of doubt or vagueness is minimised. In environmental education there is a preponderance of instructions, definitions and a specific kind of description, while communication is also established through pictures, tables,

graphs etc. The language books give special place to imagination, creativity and aesthetic use of language and are therefore generally most popular with children.

In a holistic language development programme therefore, it is necessary to understand that the development of language is not taking place only through the language textbook, but through the study of all subjects. It is important to expose children to the different forms and uses of language, e.g. the language of newspapers, of science, or language related to maps, tables and pictures, etc. Along with this, it is also necessary to keep in mind that the language being used in other subjects should not end up being more complex than the language used in the language classroom, or it will surely lead to difficulties in learning.

### **How should Language Learning be Assessed?**

Assessment is not an end in itself. It is merely a means for the teacher to find out whether children have learnt what she/he was trying to teach. It needs to be noted that in the case of language learning, there are many aspects that cannot be defined easily. In aspects such as reading correctly, spelling correctly, using words properly, information on the categories in grammar, etc. the teacher knows what she/he has to teach and the extent to which her/

his students have learnt. But being able to enjoy poems, the ability to think and reflect, the ability to put across one's opinion in one's own way, the development of creativity — there are several such areas where the teacher can never be certain that these have been fully developed in children. These areas are very important in mother tongue teaching, but one can only make constant efforts to develop them.

Though assessment has a significant place in learning of all the subjects, we have highlighted those major points below that have a specific bearing on the learning of mother tongue in primary classes.

- Teaching-learning and assessment should go hand-in-hand. The best assessment would be one where the teacher can check at the end of the class whether children have learnt what she/he was trying to help them learn. However, this is not always possible, hence a good alternative would be to do a weekly assessment.
- For those aspects that have a definite nature and form, the assessment should be similarly clear and definite in nature. For example, in reading and writing children know what it is that they are being assessed for, and where they have made errors, which enables them to make efforts to

improve. Another assessment can be undertaken after a gap to check whether the students have overcome their errors

- Assessment should not be done with the sole objective of being able to make comparisons. While assessing children the teacher is in a way evaluating her/his own work so that she/he may know whether there has been a shortcoming in her/his teaching process. The direct impact of assessment should be in terms of an improvement in the learning of children and the teaching process as adopted by the teacher.
- With the exception of reading and writing, oral assessment should be given greater importance in the assessment of other language aspects. Correct pronunciation, reading fluently, reciting a poem, expressing one's opinion with confidence, narrating a story, etc. are many such abilities whose assessment can only be oral in nature. But in other aspects too oral assessment can easily be done. For example, the assessment of all aspects of grammar can be oral. Whether children have been able to understand the main points of a story, too, can easily be assessed orally.
- Children should not be asked such questions during assessment as encourage them to memorise. We



have seen above that in verbal language with the exception in mathematics, most of the questions do not have definite answers. Hence, children should be encouraged from the very beginning to think on their own on every question, and answer it in their own way, in their own words.

- The use of marks needs to be stopped. In an examination of 100 marks if a student is ahead of another by 1 mark, this does not necessarily mean that she/he is the best student in the class. In reality it cannot be decided who is the best student in the class, nor is it necessary to decide. To make a language class more lively and participatory, an element of competition can occasionally be introduced, but to use the examination as a medium to declare some children as better than others and some as being poorer than others will lead to a distorted self-image in the case of both. In this context we should remember the statement of J. Krishnamurthy that "To compare B to A is to destroy them both."
- There should not be a pre-decided level of attainment because the race to getting there puts a great pressure on the teacher and the students. Children's attainment grows gradually. This is what should be used as a basis to proceed forward gradually.
- Children's weaknesses should be identified through constant observation, different activities and their language behaviour. This observation is part of the continuous evaluation. This should be in such a form as enables children to enhance their abilities. Weaknesses and their causes can be identified through diagnostic tests. Alongwith weaknesses, information should also be collected on aspects on which the child is doing well. Using the child's strengths as a basis for further teaching in areas in which the child needs help can be a positive way of providing remedial teaching.
- Writing correctly is possible only when we have learnt to read correctly. Therefore, when a teacher puts a cross sign on a spelling error made by children, they get discouraged. The emphasis on correctness should not be such that the children lose interest in reading and writing. Instead of this their attention should be drawn to the correct form. This will result in children gradually correcting their errors on their own and they will also develop the ability for self-evaluation. The same method can be adopted for errors in words or sentence structures.
- During the assessment of oral skills of students, they should not

be interrupted for making errors while speaking. This shakes their self-confidence. Instead they should be given more and more opportunities for listening to the correct form of language.

- Because more than one skill and ability go together in the learning of language, their assessment too should be done in the form of related skills and abilities clubbed together into units, with one unit being assessed at a time. e.g. speaking skills are related to listening, similarly comprehension and speaking are related to reading.
- No single competency can be assessed in isolation. Such an assessment is usually forced upon and artificial. The holistic approach to the teaching of language applies to the assessment of language learning as well, which in turn should also be holistic.

## SECTION II

### **Teaching of Language other than Mother Tongue/Home Language**

In the previous section we discussed the teaching of language in situations where the home language and school language of the child are the same or very similar. In this section we will take up the other two situations listed earlier and in the next

section we will take up the third situation wherein English can be introduced at the primary stage.

Before we go into the approaches to teaching language in these situations, let us try to understand the possible harmful effects of teaching children in a language which is not familiar to them and ignoring/discouraging the language they are born and brought up with.

We need to consider the effects of learning a new language from two points of view :

- learning of a new language or
- using of the new language as the medium of instruction.

Research has consistently shown that children in the early years have a tremendous capacity to learn new **languages provided there is enough of it in their environment**. Therefore, introducing new languages to a child will not be a burden on the child if she/he is able to get exposure to these naturally. By this is meant being placed in an environment which provides the child with ample opportunities for listening to the new language and speaking it. The child will pick up the language spontaneously if the child feels the need to communicate in that language. Therefore, the two essentials for learning a new language are

- the desire or need to communicate, which should be there in the child.

- an environment in which there is a lot of listening and speaking in that language, (as a prerequisite) followed by opportunities for reading and writing which should be provided to the child.

The problem a child faces in a situation where her/his home language is different from the school language results from

- being made to use a new and unfamiliar language as the medium of instruction which is likely to interfere with the child's information processing
- not receiving a positive response or encouragement to use the home language that has been hers/his since birth.

A child's **home language or mother tongue** is very closely linked with the child's own identity and therefore, has a great deal of emotional significance for her/him. In situations where this language base i.e. the mother tongue or home language forms the foundation for further learning, the child moves ahead with confidence and a sense of competence. Being already familiar with the language, learning and understanding in other curricular areas also becomes much easier, thus helping the child move on from one successful experience to another. The positive attitude existing in the environment for the language, which is her/his mother-tongue, also develops in

the child a sense of pride in her/his identity, as also a sense of belongingness.

If we now consider the other three situations mentioned in the introduction in which the child has little or no familiarity with the language in which she/he is expected to understand, learn and express himself/herself, while the language she/he knows is discouraged or not looked upon with favour, the child is likely to be affected both emotionally and intellectually. It almost amounts to a rejection of one's own identity or personality. The difficulty the child has to face in such situations in understanding what is taught and expressed what she/he has learnt is also likely to lead to under-achievement which can result in a sense of failure, low self-esteem and alienation for the child. And all for no fault of the poor child!

### **Helping Children in Different Situations**

Although the various language situations likely in the country have been grouped into four categories earlier in the chapter, these are only for convenience of discussion. Each category can have several variations, requiring its own kind of language teaching approach specific to the background of children, the kind of teacher available, the facilities with the school, the language environment

around the school/home of the children and various other factors. As a matter of fact, socio-linguists believe that most, or even all situations in our country are neither monolingual, nor bilingual but actually multi-lingual i.e. every classroom situation has children of various language backgrounds and the teacher must consider this not as a deterrent to teaching but as a resource by encouraging children to learn from each other.

However, in order to help plan language teaching in various situations we may consider the broad categories separately. In considering these it must be noted that planning language teaching should take into account first the objective of teaching any language and that is to help the child to

- communicate in the language
- use it as a tool for learning.

The home language is learnt by the child in an informal manner through exposure to it in and around the home situation. The school language, however, has a different style and a textbook approach to teaching it. The question we need to ask ourselves is — to what extent does teaching of language through this approach help meet the objectives of language learning?

**Since children are capable of learning more than one language at an early age, teaching the school**

**language does not mean making them unlearn their home language.**

On the contrary, while children are learning to pick up the mechanics of the school language, they can be encouraged to move on in their home language to higher and more creative use of language in thinking and expression. This can be in the form of creating their own rhymes, stories, riddles etc. It is therefore necessary to keep in mind that whatever the strategy adopted for these different situations, it must foster the cognitive or intellectual development of the child through use of her/his early language experiences, while also helping the child make a smooth transition to the main stream.

### ***Different Situations***

**Situation 1. The one in which there is no significant difference between the home language of the child and the school language** has been dealt with in Part I of this chapter under the heading "**Teaching of Mother Tongue**". The overall approach to language teaching and expected outcomes at the primary stage spelt out in this part of the chapter hold true for the other situations also. Any deviations that may be required in view of the difference in situation are dealt with in this second part of the chapter. Therefore, while planning a language programme for the primary grades

both parts of this chapter must be considered together.

**Situation 2. Where the School Language is Similar to the Home Language, with Some Variations**

This situation is very common in the country particularly in the Hindi belt where the school language is the regional language i.e. Hindi but the home language of children is often Bhojpuri, Maithali, Maghai, Braj or Rajasthani. Children are familiar with Hindi vocabulary and structures but need more exposure to the standard form of the language.

In such situations, when a child comes into school in Grade 1, the school readiness programme suggested in Part I of this document can be so planned as to help the child tide over any problems the child is likely to face. The school readiness programme, which has been suggested for a period of six weeks to two months at the beginning of Grade I, is expected to continue for a longer period in these situations, wherein the child is expected to get a lot of exposure to oral language in the form of stories, rhymes, role play, puppet play, conversation activities etc. Since the child is already broadly familiar with the school language, this will help the child pick up the standard form more easily, gradually and in a stress-free and joyful manner. It would be desirable to build in this methodology into the textbook

and transactional practices so that the child has the freedom to bring in her/his home language vocabulary, experiences and express these, whenever necessary.

**Situation 3. Where the Home Language is Very Different from the School Language and the Child has had Very Little or No Exposure to the School Language**

This situation is also very common in our country. This is particularly typical of the tribal belts in Madhya Pradesh, Orissa, Andhra Pradesh and North-Eastern Region of Meghalaya, Mizoram, Arunachal Pradesh where the school language is totally different from the home language of the child.

In some States, attempts have been made to introduce textbooks in tribal languages. Interestingly, there has been much resentment reported from parents in such cases. There were a few organised protests reported in Madhya Pradesh, Bihar and Gujarat. The reasons stated were the negative perceptions of the parents who feel that if the children are taught in the tribal language, they might remain left behind in the social ladder.

This assumption is totally unfounded, because the tribal children are not required to receive their entire education in their mother tongue. Rather, according to the proposed approach, only the first two/three years of education need to be in their

mother tongue. This approach would therefore, empower the tribal children through better and more meaningful education in the initial years by providing them a sound foundation. This will also help the children understand mathematical concepts and the concepts of environmental education more easily. When we talk about teaching tribal children in their mother tongue we do not only talk about language. We also talk about experiences (cognitive, affective and connotative). Therefore, teaching them through their language and rich context will definitely empower them, improve their achievement level, reduce drop out rate and it will help them develop a positive self concept.

It would be helpful to note here that the experiments undertaken by different organisations in the past have generally not succeeded in providing a good alternative as they tended more towards disempowering rather than empowering the community as well as the children. In some states attempts had been made in the past to introduce textbooks in tribal languages using a bilingual transfer model i.e. using both languages together in increasing/decreasing ratio to help the child move gradually to the school language.

Until recent times this approach could not deliver satisfactory results because of the way in which it was

designed. A major handicap was that adequate research base was not available, prior to developing the textbooks, regarding the nature of code switching in the tribal and regional language i.e. how these two languages occur together naturally in the communities, market places etc. Besides this, certain other concerns were also evident with this approach such as

- (a) it tends to often reflect an attempt more at acculturation or main-streaming of children into the dominant language culture rather than an integration between the two cultures and
- (b) the language in the textbooks in the tribal language is often not derived from the children's vocabulary or style of expression.

However, the approach we are going to suggest in this chapter is fundamentally different wherein, the regional language will be taught only as a separate language in Level I while in Level II there will be enough flexibility to allow the children to bring in their home language and rich experiences in homes and communities into the classroom even when the medium of instruction would be, by and large, the regional language.

Another apprehension has been with regard to teachers. Teachers appointed in tribal areas have generally been perceived to be another constraint in such situations, as

many of them are non-tribal teachers having very little knowledge of tribal languages.

Appointment of local teachers is desirable. However, this does not mean that the appointment of non-tribal teachers in places where there are not enough tribal teachers could harm the teaching learning process.

Another commonly expressed apprehension is that by allowing the home language in the class, the possibilities of building communication channels in the school language between the teachers and the children and also the possibility of teaching/helping the child gradually learn the school language, become very limited. This could have a negative effect on the total teaching-learning situation and therefore, on the learning achievement of the children as a whole.

One more apprehension is with regard to script. Whenever there is some policy decision or any real attempt to teach these children in their mother tongue, the controversy of script crops up. A socio-historical analysis of such controversies (for example Santhali Language in West Bengal etc.) reveal political motives being the main reason behind such protests rather than linguistic and pedagogical considerations. The time has come when we have to take a stand explicitly regarding which of the two — political considerations or

pedagogical considerations — needs to be given priority.

It is however quite possible that the script of the regional language might not always be sufficient to provide full phonetic expression to another language. Therefore, few symbols could be added to the script of regional language for bridging these gaps in the phonetics.

**What could be the possibilities in terms of approach to language teaching and taking a decision regarding medium of instruction in such situations?**

Keeping the objectives and considerations mentioned above in mind, from the point of view of the child, the approach suggested level-wise is to :

- keep the child's home language as the medium of instruction at Level I stage but also introduce the school language as a subject to be taught additionally and to be continued at all levels. (It needs to be noted here that the researches have shown that learning a second language would not be a burden for this age group.)
- introduce the script of the school language to the child at Level I through the content of the mother tongue with which the child is familiar and which will be learnt easily, through association. In case of ethnic communities where

there is a controversy regarding use of their script or developing a new script for the language, debate could be initiated for individual cases.

- continue the home language as the medium of instruction initially but help the child move on to the school language by end of Level II since the child would have acquired some competence in the school language by then and will also benefit from the vocabulary of other curricular areas.
- encourage children to communicate with each other in their own home language as well and use

it in creative ways so that these also get nurtured simultaneously instead of discouraging their use in level I as well as II, as is generally done.

- help children make a shift to the school language as medium of instruction by Level III.
- avoid penalizing children for use of home language even at this stage at the time of assessment.

Table below gives the expected learning outcomes, level-wise, in terms of this approach, what would be the implications of this for teaching-learning materials, teacher competencies, and training etc.

#### Expected Learning Outcomes

<i>Home Language</i>	<i>School Language</i>
<p><b>LEVEL I</b></p> <p>The child should be able to communicate her/his needs and ideas meaningfully.</p> <p>should be able to understand and comprehend what is told.</p> <p>should be able to think in the language and be able to learn other curricular areas with interest and understanding.</p>	<p><b>LEVEL I</b></p> <p>should be able to develop/acquire simple vocabulary related to familiar objects and events.</p> <p>should be able to recognize the script through home language content.</p> <p>should be able to read and write simple words and short sentences.</p> <p>should be able to read simple text in the form of short poems, short stories or sentences with interest and understanding in the script of the school language.</p>
<p><b>LEVEL II</b></p> <p>should be able to use language creatively and express ideas clearly.</p> <p>should be able to increase own vocabulary through vocabulary of other subject areas.</p> <p>should be able to interact in familiar social</p>	<p><b>LEVEL II</b></p> <p>should be able to follow simple oral instructions and narrations.</p> <p>should be able to respond to simple questions and describe, narrate experiences in simple, short sentences.</p> <p>should be able to read words, phrases and</p>



situations using home language with flexibility.

should be able to read short texts and identify main ideas and supporting information.

#### LEVEL III

should be able to interact in familiar social and learning situations.

should be able to shift easily from home language to school language and vice versa.

simple sentences with ease including vocabulary from other curricular areas.

should be able to write 2-3 sentences and also experiment with longer sentences, where possible, to convey information and ideas using script of school language.

#### LEVEL III

should be able to understand, learn other subjects through school language.

should be able to read and write and express herself/himself with confidence.

If the medium of instruction is to be the mother tongue/home language, to what extent can textbooks be prepared in so many languages, many of which do not even have a script?

The most essential requirement for this situation is a teacher who is from the same community and who is well-versed in the culture of the community from which the children are coming.

The teacher needs to be given special **training** in, and facilities for, preparing teacher-made material in the children's home language both for Level I and Level II. Each teacher will thus need to prepare her/his own text for the children. A handy **guide** for teachers placed in such situations, giving specific guidelines for development of materials and content would be also very necessary. Some training camps could be organised to change the attitude of the teachers towards different ethnic groups and their languages. Besides an essential part of any programme in this context, would be

the regular interaction with, and orientation of, the community regarding the merits of the approach from the point of view of the child. The **parents' need** of getting their children to learn the regional language can be met through this approach by introducing the regional language as a separate subject. The approach, with adaptations wherever necessary, needs to be tried out on an experimental basis before accepting it as a model approach.

### SECTION III

## Teaching of English

### Introduction

The proposed framework endorses the stand taken in the National Curriculum Framework (1988) that the medium of instruction at the primary stage should be the mother tongue or the regional language. English may be introduced as a subject at level II after the child has acquired a minimal basic literacy in her/his

mother tongue, provided appropriate facilities for teaching of English exist. **It should, however, not be introduced as a medium of instruction at the Primary level.**

### **Rationale**

The reasons for introducing English at the primary stage range from functional to academic :

- For the common man English is looked upon as a means for getting better jobs and better placement in life. Parents from all sections of society, rural and urban, affluent as well as from the weaker sections are keen that their children should start learning English right from the primary school. Yielding to public pressure, some states like West Bengal, Punjab, Uttar Pradesh and Haryana have introduced English at the primary level.
- English is an important international language. Most of the knowledge about developments that are taking place at breathtaking pace is available in English. Knowledge of the language will enable the child of today to function more effectively in the world of tomorrow. It will enable her/him to keep herself/himself abreast of the latest developments in different fields of knowledge be it science, technology, commerce or fine arts.

In order to plan the teaching of English at Level II it is first necessary to know what the child already knows when she/he comes into Level II.

### **Entry Behaviour of the Child at Level II**

The child who comes to Level II is expected to have

- acquired the elementary competencies of listening, speaking, reading and writing in her/his home language.
- learnt to participate in simple communicative tasks like seeking information and supplying information.
- developed familiarity in most cases with almost 500 English words which have been absorbed in level I like 'hello', 'car', 'bus', 'telephone', 'station'.

### **Learning Outcomes at the End of Level II**

By the end of Level II the child should be able to :

- get initiated into the four basic abilities of listening, speaking, reading and writing English in a balanced way.
- communicate in English in real life situations and be able to perform language functions like supplying information, seeking

information, making requests, giving instructions etc.

- acquire a vocabulary store of 400-500 words, about 50 on the recognition level and try to use a majority of words in day to day life.
- handle the essential phrase and sentence patterns of English like statements, questions, requests along with a few important blocks of language like tenses, interrogatives.
- learn to understand conversation within her/his experience.
- appreciate the melody of the spoken word.
- enjoy learning English.

### **Level III**

**By the end of Level 3 the child should be able to**

- further develop the abilities of listening, speaking, reading and writing English and be able to handle larger content of language in speech, reading and writing.
- speak 2-3 sentences, to read simple instructions, short stories, descriptive pieces, letters
- write short paragraphs
- communicate in English — perform more advanced language functions like taking messages, making apologies, expressing

agreement or disagreement, reporting events etc.

- add about 500 words to her/his vocabulary repertoire
- handle phrases and important blocks of language
- understand the emotion/intention behind what is being said
- read and understand instructions on the roadside, sign boards, names of places, headlines of newspapers, advertisements etc.
- appreciate the melody of the spoken words and be sensitive to the creative uses of the language.
- enjoy learning English.

### **Teaching-learning Process**

Curriculum transaction in the initial years is a judicious blend of oral - aural teaching ; situational teaching and communicative language teaching. Each new language item is first introduced orally in appropriate situations and is practised through a variety of communicative tasks. Then it is reinforced through reading and writing. Thus, there is an integration of the four skills of listening, speaking, reading and writing.

### **Spoken Language**

It is essential that teaching is learner centred. It is the learner who should use the language in speech,

reading and writing. An effective way for making the learner, the focal point of the teaching learning process and for developing communication skills is through **group or pair work**. This ensures interactions which are crucial to communication. The activities used are role play, simulation, dramatization, recitation, exploiting situations from the world around the learner and from other disciplines, language games, pictures, and the electronic media.

### **Reading**

Children should be able to read words, group of words, sentences from the blackboard, flash cards, and from their books. They should also be able to read simple story books, children's magazines etc. Such books should be well illustrated and in bold print to facilitate the learner. Tasks must be graded.

### **Writing**

Writing tasks should be graded. They should range from the tracing of lines to the writing of words and short sentences. Children should be given practice in tracing, copying and

drawing lines (horizontal, vertical, diagonal), circles, and broken circles. This would prepare them for writing letters of the alphabet. They then should copy words, phrases and short sentences.

### **Learning Materials**

There should be for each year a Language Reader, accompanied by an activity book and audio cassettes. The Reader should contain language items — both grammatical as well as literary. These should be presented in appropriate natural situations. The texts should be child-friendly i.e. should contain themes, stories, poems, legends about birds and animals which would interest the student of this age-group. The exercises after each lesson should be designed to help the learner, acquire language skills. The Reader should be attractive with lots of illustrations.

The companion activity book and the audio cassettes should provide the learner scope for more practice in the four language skills.

Cassettes should contain rhymes, action songs and a few dialogues for promoting communication.

While developing materials Universities, NCERT (NIE, CIET, RIE), IGNOU, CIEFL, ELT/s, Regional Institutes of English need to collaborate.

## **Assessment**

There should be only continuous assessment. Continuous assessment should be both oral and written.

**Oral Assessment :** This can be in the form of

*Group work* like a communicative task between two or more than two pupils (for example giving instructions on how to draw a cat).

*Individual Oral Assessment.* This can be done in situations where the learner

- asks and answers questions
- describes situations
- recites poems
- describes pictures
- reads out a piece from a book preferably other than her/his textbook
- answers questions on the passage read.

## **Written Assessment**

It should cover comprehension reading; elements of language—both grammar, vocabulary and composition.

It can be done through comprehension questions, cloze-tests, writing of small paragraphs/essays etc.

## **Points for Consideration**

The two essential pre-requisites for the success of the teaching and learning of English in the primary school are :

- Intensive teacher development programme.
- Development of learning materials.

## **Teacher Development**

With the existing trend in the states of introducing English at the primary stage in the state schools, a major concern that emerges is the lack of facilities and environment for learning of English. The crux of English teaching therefore rests with the teacher who should be competent herself/himself in English and well trained to handle varied teaching learning situations.

If teachers already working in the schools have to be trained on a large scale the cascade model will need to be followed. To avoid training loss it will be necessary to provide ample resource material.

## **Content of the Training Programme (Inservice)**

The thrust of the training programmes should be on (a) acquainting the teachers with the course materials and (b) the strategies for achieving the learning outcomes. The training programme should have a pronounced practical bias. The theoretical inputs should be reduced to the barest minimum. Demonstration lessons should be an integral feature of the programme.

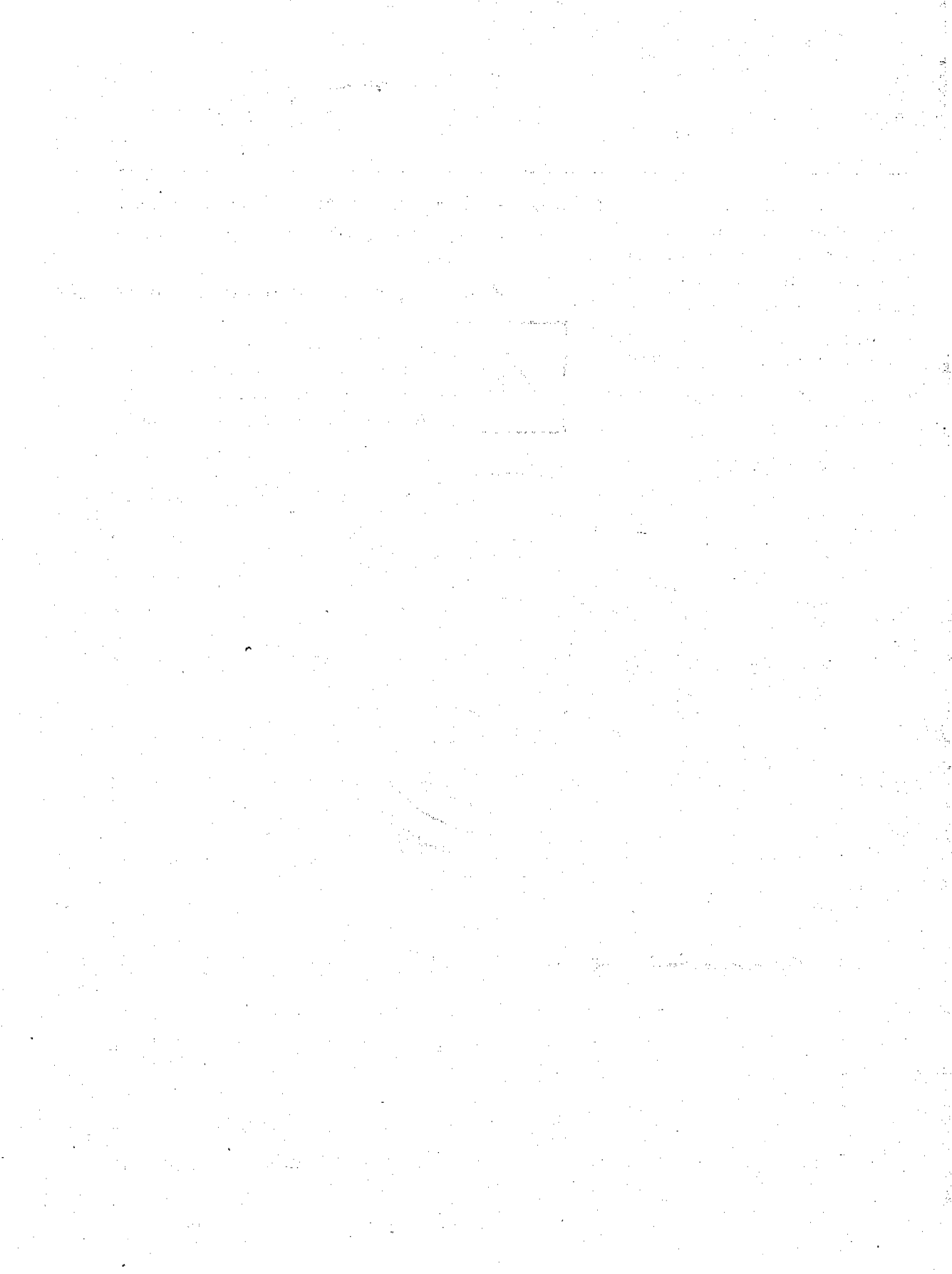
In a 2-week inservice training programme for the teachers, two hours per day should be set aside for content enrichment. During this period they should, for example:

- *study a bridge course like Enrich your English — NCERT.*
- *Listen to talks, tapes, radio broadcasts.*

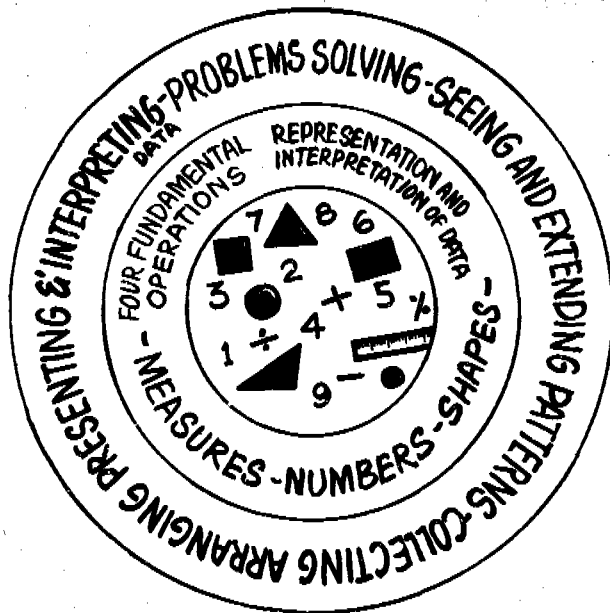
- *Take part in communicative tasks.*
- *Select suitable stories and narrate them.*

Resource persons should be carefully selected. They should be PGTs, TGTs with specialized ELT training. They should have basic competence in English and should also be willing to be involved in these programmes.





4



# Teaching of Mathematics



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## Introduction

**L**ET US PAUSE for a while and observe the world around us. Is it not amazing how much of **Mathematics** we have in our own environment? Interestingly, nature itself demonstrates to us a *perfect mathematical structure*. e.g., the rotation of the earth, the movement of stars and planets, the growth of plants and trees, the blooming of flowers are all evidences of perfect symmetry and rhythm in the environment and yet we as teachers tend to keep mathematics confined to the textbook and within the four walls of the classroom!

In Part I of this document, while discussing the objectives of primary education we have said that, "It will be necessary for every child to acquire not only knowledge but more important than that, the basic skills of learning so that she/he can learn on her/his own. This would include the skills of literacy, numeracy, problem solving and critical thinking and some basic knowledge too, to be able to find/access and understand relevant

information, critically examine it and be able to apply it meaningfully in day to day situations".

Mathematics, by its very nature, provides ample opportunities to the child for acquiring the above skills and knowledge if taught properly and in ways that relate it to the child's own environment and experiences.

Knowledge of Mathematics is needed by each one of us, including a child at the primary stage. A child of the primary level requires mathematics learning to be able to :

- read a clock/calendar/ railway/ bus time table.
- make day-to-day purchases.
- measure quantities, (mass, height, temperature etc.).
- make estimates and verify results.
- represent and interpret data from graphs, pictures etc.
- appreciate patterns and symmetry in the environment.
- develop reasoning, logical thinking and problem solving skills.

Study of Mathematics provides ample opportunities for acquiring many skills and habits which are crucial in one's life, as by its very nature —

- It is exact, true and to the point knowledge.
- It enables one to argue the correctness or incorrectness of a statement.
- It develops reasoning, critical thinking and analytical skills.
- It trains and disciplines the mind.
- It helps in learning many other subjects.
- It is useful in every walk of life.
- It has a lot of recreational/fun content and provides exciting leisure time activity.

### **Some Wrong Notions Attached to Mathematics**

- It is a difficult subject and cannot be learnt by everyone.
- It is particularly difficult for girls.
- It is a subject of mere symbols and manipulation and does not have any relevance or use in daily life.
- It requires learning definitions/rules/formulae by rote.
- It is not necessary for everyone to

learn mathematics in order to lead an effective life.

### **Major Concerns in Mathematics at Primary Stage**

The National Curricular Framework 1988 reads, *Mathematics should be visualised as a vehicle to train the pupil to think, reason, analyse and articulate logically.* But if we observe the situation in schools across the country one wonders if in reality we are anywhere near to achieving these objectives which are so essential to equip the child to function in day to day life. As we take a closer look at teaching-learning of Mathematics, the following four major issues/problems get significantly highlighted:

- Children's performance in mathematics at the primary stage is very poor as shown by achievement tests conducted from time to time across the country.
- Mathematics teaching-learning today has come to mean, children merely performing operations mechanically, almost by rote, by mastering the algorithm without actual understanding of concepts. The skills of *learning to know* are thus not developed at all.
- Of all the subjects taught in school, mathematics is the one most feared and disliked one by children. Such attitudes stem

largely from the teaching learning strategies adopted when children, though pick up algorithmic skills yet but fail to understand the concepts. Mathematics being hierarchical in nature, children fail to acquire a sound foundation which is essential for building later concepts thus leading to learning gaps and a fear as well as dislike of the subject. Also, mathematics teaching is not made interesting enough for children but limited to a very abstract/symbolic level which is not in tune with the developmental status or learning needs of children in the primary grades.

- Children's learning of mathematics is not related to their environment or previous experiences in and out of school. Therefore, unlike in other curricular areas, the child's learning in this area does not get adequately reinforced or strengthened outside the classroom

In this chapter we will try to address these concerns by reviewing and discussing the proposed approach to *five* major aspects which have an impact on teaching-learning of mathematics :

- **The Curriculum Framework**
- **The Proposed Methodology**
- **The Teaching-learning Materials**
- **The Assessment**

## □ **Teacher Preparation for Mathematics**

### **The Curriculum Framework**

The main considerations while developing a curriculum for mathematics are that it should

- relate the expected learning outcomes (ELOs) to the developmental status of children
- reflect a spiral approach wherein learning takes place as a slow process involving loops and feedback cycles so that children get the opportunity to revisit concepts again and again
- relate mathematics to the child's immediate environment
- provide for opportunities where the child can apply the new concepts learnt in a variety of situations and thus develop understanding of the concepts introduced
- lay stress on certain concepts and skills which will develop in children skills of learning to learn as well as equip the child to meet present and future needs. These include among others, skills of problem solving, seeing patterns and extending them, representing and interpreting data.

Keeping in mind the above expectations and objectives the proposed curriculum for mathematics may include the following *five* learning areas.

- **Numbers**
- **Four Fundamental Operations**
- **Measures**
- **Shapes**
- **Graphs\***

The new focus in the proposed curricular framework is on developing the following skills across all the five learning areas listed above :

**Problem Solving :** Problem solving suggests a shift from memorisation to understanding of concepts and ability to apply these in both familiar and unfamiliar situations, whether in day to day life or in problems given in the workbook/textbook. These skills include skills of observation, experimentation, estimation, reasoning and verification. The emphasis in this approach is more on the process involved and not just on the product.

The concept of problem solving is based on the premise that life's problems are open ended having more than one solution and hence require the use of logic, reasoning etc. to take decisions. Problem solving activities also help to connect mathematics to the real world.

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\* Inclusion of "Graphs" as an area is in no way a downward extension of higher level topics. This has been suggested keeping in view the childrens' constant exposure to vast amount of graphs used for presenting the information on media and the technological advances. The area, of course, has to be dealt at the introductory level.

### **Seeing and Extending Patterns :**

Study of patterns requires students to recognise, describe and generalise patterns to arrive at rules and formulae. If children are made to identify regularities in events, shapes, designs, sets of numbers they would realise that regularity is the essence of mathematics. It provides the basis for inductive learning too. Exploring patterns is both fascinating and interesting and can also be made a fun activity for children.

### **Collecting, Arranging, Presenting and Interpreting Data :**

A child of the 21st century would need to understand that information in her/his life will flow in the form of not only words, phrases and numbers but also pictures, charts, tables, graphs etc. The television programmes today are full of such information in the form of charts, diagrams etc. e.g. the temperature chart or scores of cricket etc. Understanding and use of this information by children needs development of skills of collecting, arranging and interpreting it through their inclusion in the curriculum of mathematics. These skills would not only help in learning various concepts of mathematics but also those in other curricular areas.

### **A Vision of the Child at the End of Primary Stage**

In view of the learning areas and

skills suggested above, a child by the time she/he completes education of primary stage should be able to :

- understand whole numbers and numerals and use them in real life situations.
- understand the four fundamental operations viz addition, subtraction, multiplication and division, and perform these with *speed* and *accuracy* in solving problems given in the text/workbook as well as in day to day life.
- understand various kinds of measures and use them appropriately in solving relevant problems.
- appreciate geometrical shapes and their characteristics and see their role in shaping and beautifying a variety of objects in the environment such as jewellery, buildings, monuments, floors, textile etc.
- enjoy using mathematics creatively for solving riddles, puzzles, creating models, designs, mathematical stories and rhymes, reading patterns etc. individually and with others.
- relate mathematical concepts to daily life situations.
- interpret data in real life situations.

Keeping in mind the above expectations from the children, the Curriculum in Mathematics for the primary

stage will need to focus on enabling children to :

⇒ **develop an understanding of the concept of numbers**

- use vocabulary related to numbers
- count, read, write, sequence, describe, round off numbers
- see ordinal numbers as positional numbers
- recognise simple numbers as positional numbers
- recognise simple number patterns (even, odd, prime, multiple, factors etc.)
- apply their knowledge of fractions, decimals, percentage and their equivalents to day to day experiences.

⇒ **perform the four fundamental operations of addition, subtraction, multiplication, division with speed and accuracy and be able to apply these with understanding to solve problems in daily life situations**

- use vocabulary related to mathematics in connection with numbers, operations, symbols etc. e.g. sum of difference between, plus, minus, equals product, quotient etc.
- add, subtract, multiply, divide whole numbers
- add and subtract like and unlike fractions and decimals

- add, subtract, multiply decimals upto two or three places as for rupees and other measures
- recall instantly sums, differences, products of pairs of numbers
- estimate as well as verify answers through alternate methods
- ⇒ **understand use of different measures such as length, mass, capacity, time, money, temperature and angle and be able to use these measures in situations arising in the child's immediate environment**
  - use vocabulary related to comparison
  - measure length, mass, capacity using non standard and standard units
  - derive and find area and perimeter of a rectangle, square and see the relationship between perimeter and area in real life situations
  - derive and find the volume of a cube and cuboid
  - read a clock or watch to the nearest second and calculate lapsed time
  - consult a calendar to find corresponding days and dates and be able to construct a calendar too
- read a bus, railway time table for timings of arrival at, departure from, distance between places and time taken for travel
- handle simple money transactions
- read, record and interpret temperature when using a thermometer be it in degrees celsius or fahrenheit and be able to tell the health of the person
- read and interpret weather/temperature charts and see relationships of variation of temperature with weather conditions
- ⇒ **identify and classify objects in the environment in terms of their shapes and other characteristics and be able to discuss, describe and draw two- and three-dimensional shapes**
  - identify and classify objects in the environment in terms of their geometrical shapes, and their characteristics
  - recognise, discuss, describe and draw two and three dimensional shapes
- ⇒ **represent and interpret information in daily life situations**
  - represent given information in a variety of ways like pictures, diagrams etc. for effective communication

- interpret meaningfully information given through pictures, simple diagrams, bar charts, graphs that appear on the television, magazines, newspapers etc.

⇒ **enjoy mathematics and feel confident about it**

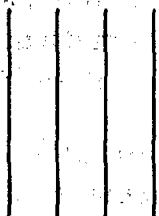
(The detailed expected learning outcomes for each of the three levels are appended at the end of the chapter).

## The Proposed Methodology

### • Understanding the Learner

In order to help children learn Mathematics it is important for us to know and understand our learner first. Broadly, at the pre-primary and early primary stages a child is at the *pre-operational* stage in terms of her/his mental processes where the child's judgement is based on how things appear rather than on adult logic. The child does not realise that certain actions can be reversed e.g. she/he thinks the same objects placed further apart in a line to form a longer line are more in quantity.

Example 1



Example 2



S/he also does not understand that if  $2+3 = 5$ , then  $5 - 3$  will be equal to 2.

The child then enters the *concrete operational* stage during the primary years around the age of 6 to 7 years. Gradually, the child learns to conserve as well as grasp many basic ideas of mathematics, but only in terms of concrete operations. In most states, 5 years olds are now entering school in grade 1 and they may maturationally not be ready to understand basic number concepts. No wonder children have problems with the conventional methods of teaching mathematics on the blackboard because these do not help children make the transition smoothly from concrete to abstract experiences. Relating the problem to concrete real life experiences at this stage helps children to rely on their own understanding and thus construct their own knowledge.

Though every child goes through similar stages of development, the process may vary from one child to another. This difference may be related to the socio-economic/cultural background as well as individual differences in intelligence, attitudes, style of learning etc. For example, a shopkeeper's child exposed to selling and buying can calculate costs etc. faster than a child only working theoretically in the classroom. Again, girls in certain households who are expected to cook

from an early age develop an intuitive grasp of proportionality, conservation of mass and other mathematical concepts. Children use different strategies for grasping new concepts e.g. a child may either use a "count all" or "count on" strategy to begin with and gradually proceed to more efficient strategies on her/his own.

We also need to keep in mind that children of the same age can be at different operational stages, as also children of different ages can be at the same developmental stage. Thus we need to observe our learner carefully, assess her/his capabilities and not be guided only by age. The activities planned and learning situations must match the child's aptitude and attitude at that point of time. Also one needs to be aware that there is a continuity in the cognitive development of a child and the stages tend to build upon in succession.

- **Making Teaching-learning Child-centred**

- (a) *Ensuring readiness for learning mathematics*

Mathematics has been looked upon only as a study of number symbols even at the pre-school level. Tender minds at 4 or 5 years of age cannot receive the subject in its narrow form of *Notations*. Children need to form some basic prenumber concepts related to size, length, mass etc., (e.g., big-small; long-short; heavy-light etc.)

through a process involving *Matching, Identification, Naming, Seriation* with respect to each concept. Children also need to sharpen their skills of classification, grouping and sequential thinking which provide them a sound foundation for learning Mathematics. These need to be developed by giving children opportunities to apply these skills on concrete and familiar objects and experiences. Such experiences help children form concepts and develop related vocabulary which are both basic to learning of Mathematics.

These experiences form the readiness programme for Mathematics. Since a large number of children come into grade 1 without a good Early Childhood Care & Education (ECCE) base, the initial part of Level 1 curriculum should focus on ensuring this readiness in children. **At the pre-school and level I stage, therefore, a variety of experiences in the concrete form should be given greater focus than asking the children to write numbers, or simply solve problems mechanically.**

- (b) *Ensuring expectations from children match developmental status*

At Level I emphasis should be on **developing basic mathematical vocabulary and simple computational skills**

At Level II concepts introduced in Level I need **reinforcement along**



### **with some extension of learning**

At Level III a more **thorough understanding** can be expected of basic mathematical concepts since by now many children are able to conserve and reverse their thinking.

#### *(c) Planning and sequencing experiences to suit process of learning*

Children's learning follows a process of moving from concrete experiences to spoken language, then to pictorial representation and onto the symbolic form ( $E \rightarrow L \rightarrow P \rightarrow S$ ). The planning of teaching-learning must therefore take this sequence into account and not be guided merely by the logic of the subject.

The teaching-learning of mathematics at the primary stage should, therefore, not be limited to text/workbooks but should have a combination of methods including :

- *Concrete Experiences*
- *Meta learning or talking, discussing, reflecting on the how and why of solving problems and using active Mathematics vocabulary*
- *Paper and Pencil Tasks*
- *Mental Mathematics*

The ratio of such activities will vary from level to level and possibly from individual to individual as well. This approach of building activities around these four categories will not only provide for spiral learning in children but also help them progress from

concrete to abstract experiences. For example at Level I more concrete experiences would be required, while by Level III children should be able to more effectively handle paper pencil tasks and meta learning activities.

*Talking mathematics* is essential to understanding mathematics and developing mathematical thinking. Children at all levels should therefore be given opportunities to talk about mathematical ideas and use mathematical words and phrases orally before learning to represent these symbolically.

#### *(d) Relating new learning to child's previous learning, both in and out of school*

The teacher must begin from what the child already knows and can do. For example, most children understand *fractions* in the concrete form much before they encounter them in symbolic form, e.g. "give me half of the chapati", "it is quarter past 3" etc. Why not build upon this understanding to teach fraction? Using concrete examples and situations from the child's environment will facilitate the process of drawing out what children already know as also help them to relate learning to life situations. Thereafter use of mathematical symbols can be introduced.

#### *(e) Ensuring active involvement of children in the learning process*

Active involvement means doing

things, observing materials and phenomena, comparing, asking questions, looking for patterns, classifying, generalising, setting problems, solving them and so on. This way children are encouraged to make sense of what they are learning and thereby develop a better understanding of Mathematics. A variety of experiences need to be provided to encourage, promote and reward active involvement, laying stress on practical Mathematics. Children should also be encouraged to come up to the blackboard and solve problems to ensure participation and build up their confidence.

*(f) Providing opportunity for spiral learning*

Spiral learning implies allowing children to revisit concepts time and again but with a greater degree of complexity each time to match the child's level of understanding and maturity. e.g. Addition of one-digit numbers is introduced at level 1. At this stage straight forward addition e.g.  $7+2 = \underline{\quad}$  can be given. When revisiting at level 2 it can be given as  $3 + \underline{\quad} = 9$  or open ended as  $\underline{\quad} + \underline{\quad} = 9$ . Children also need a lot of repetition of experiences to derive understanding of concepts or pick up skills.

*(g) Providing opportunity for peer group learning*

As indicated in Chapter 6 children learn more and better if given an opportunity to interact with their

more able peers and the teacher. Children who have mastered skills or concepts earlier than the others can thus help to tutor them. This is particularly of significance in a multilevel situation where children are moving at different paces. There is research evidence to show that such an input helps the learner.

*(h) Using/adopting a combined approach of both teacher instructed and child centred activities depending on the learning objective*

Research has also shown that any one method or technique cannot help attain all learning objectives. Even in a child-centred approach there is a place for traditional chalk and talk methods depending on the purpose, e.g. development of skills of four operations may need more of formal teaching and drill whereas understanding of concepts would require more of the kind of activity based methods that give the child opportunity to construct her/his own knowledge through active participation and reflection. Similarly, while understanding is emphasized, rote learning also has a place e.g. in memorizing tables to gain speed in calculation.

*(i) Creating a democratic learning environment by*

Providing a non-threatening environment where errors are considered as a natural and inevitable part of the process of learning is very important.

Children should be encouraged to guess, experiment and use new/different strategies for solving problems, e.g. a child who is always used to finding the product of four and five by adding has to take a risk in order to replace this strategy by a multiplicative one.

Creating a mathematics corner where children's learning is reinforced and they can practise Mathematics concepts and skills as also make new discoveries through interacting with materials, and the peer group. The corner should make accessible to children material from the Mathematics kit like **cubic rods, abacus, cuisenaire strips, puzzles, fraction discs, mathematical games** etc. The corner will provide a friendly and relaxed setting for learning and cater to different learning styles. The teacher can observe how children work here on different activities and listen to them discussing etc.

Helping children experience Mathematics through a variety of examples in the kitchen, in the market, on the playground, in the bus, in the classroom and in many other familiar situations can go a long way in making it interesting and useful. As far as possible teaching learning should take place in settings which provide a rich mathematical environment.

### **Teaching-learning Materials**

Till today, by and large a single text-

book has been in use for teaching mathematics. But, keeping in view the dynamic nature of the curriculum and the need to cater to the interest of all children, no single textbook is likely to suit all children. Thus there is need for **graded workbooks/modules/worksheets** for children and a **detailed teacher's resource book** to guide teachers as to how to devise appropriate teaching-learning strategies. In addition, a lot of concrete material is required to encourage children for development of creative and critical thinking through fun filled activities and tasks.

For facilitating learning of mathematical concepts, skills, and processes effectively it is necessary to select instructional materials keeping in view the age and level of children. The whole package of instructional material for Mathematics at a particular level may thus consist of :

- A workbook in graded form
- A text-cum-workbook in graded form
- Teaching aids in the form of concrete materials, games, puzzles, Mathematics kit;
- A teacher's resource book

For level I, there is no need of developing or prescribing a textbook as the child at this stage cannot read and comprehend the language, instructions or presentation. The child, of course, requires worksheets to practice the

learning provided to her/him, for which a workbook may be designed. Since the duration of this level is two years or more, one workbook consisting of a hundred or so worksheets may not be desirable. Developing two or three workbooks would perhaps be needed. At this level the concrete materials either procured or arranged by classroom teachers, games, visits to markets, excursions, field trips, etc. can form to a great extent, the package of instructional material to be used.

For level II, the package may contain besides teaching aids of several kinds, a text-cum-workbook and/or workbook. While developing the text-cum-workbook the vocabulary, form of sentences and instructions to carry out the various tasks should be within the comprehension level of the child of this age group. An enrichment module may also be included which may contain worksheets pertaining to the more complex exercises and skills which may be required by only the fast learner.

For level III, the package should consist of a textbook written in a self learning style. The use of teaching aids may continue but on a limited scale since at this level the child would need to get ready for the upper primary stage. Again, while developing this book the vocabulary, sentences and instructions to carry out the various tasks should be within the comprehension level of the child of this age group.

The most important material in the package would be the teacher's resource book—one for each level. This book should guide the teacher on :

- how to handle each area of learning
- how to formulate appropriate teaching-learning activities
- how to assess individual's learning level
- how to diagnose shortcomings in the learning
- how to develop remedial tasks to improve learning level of slow learners etc.

In addition, this book must provide the teacher a range of activities, games, etc. that she/he can use in providing learning to children.

### **Assessment of Learning**

As mentioned earlier, assessment is a process of collecting evidences of learning, analysing evidences and improving the level of learning. It is an essential and integral part of the teaching-learning process. Assessment is not a one time activity to simply label children good, bad or average but aims at improving levels of learning by assessing the learning on a continual basis. It is not an end in itself but the means of providing information which can form the basis of future action in the form of remedial measures. Assessment is aimed at

ensuring attainment of the desired learning by all and not on grading children, comparing the performance of one with the others or screening children.

The techniques and tools that a teacher adopts in the evaluation process, should be such that the process along with the product of learning is assessed. At this stage, therefore, use of select-type item tests is not desirable. (Example: A child should be asked to write 0.5 in percent rather than to indicate which of these four 0.5%, 5%, 50%, 500% represents 0.5?)

Depending largely on paper-pencil tests is also not desirable, since oral and performance tests evaluate learning of children of primary stage in a better way.

In order to ensure that the learning has been attained at the understanding and application level and not merely at the level of memory, assessment has to be based on what has not been given in the books or used for practice. It has been rightly said that, "Acquiring information through rote learning is not the aim of education as this job can be effectively done by a computer!"

The various kinds of tools for assessment, available to the teacher, could be as follows :

- teacher observation schedule/ check-list
- structured interviews with students

- oral tests
- paper pencil tests
- practical skills test
- project work
- individual's independent work

Child's learning should be gauged with reference to the list of concepts, skills, processes and experiences stated in the curriculum and on a three-point scale, namely A, B and C representing the following levels:

**A : introduction to the concepts, skills, processes and experiences**

**B : involvement with the skills, processes and experiences**

**C : mastery of the concepts, skills, processes and experiences**

If difficult to implement, the ideal situation would be to keep each child's learning profile in a proforma given below. The teacher should tick and put the date under the appropriate column when the child has acquired.

Concept, skill, process or experience	A	B	C	Columns

### **Teacher Preparation for Mathematics**

We all know that the present day

teaching of mathematics is far from satisfactory. But we cannot blame only the teacher for that. In fact, the quality of pre-service and in-service programmes need to be scrutinised thoroughly from the point of view of mathematics and suitably modified with a view to make them more effective.

The teaching of mathematics, involves two important aspects, viz. adequate knowledge of mathematical concepts and efficient techniques of teaching the concepts. A teacher cannot carry out teaching of mathematics in an effective way if there is any serious weakness in either of the two. At present, a large number of teachers teaching mathematics in primary classes are neither adequately equipped with the content of mathematics nor adequately trained in techniques to be used for the teaching of mathematics. Hence there is an urgent need to equip the teachers on both aspects, through pre-service and in-service programmes.

A teacher who has to teach mathematics to children must be equipped with:

- Adequate understanding of the subject
- A fair knowledge of the applications of mathematical concepts
- A wide variety of teaching-learning strategies so that each child can be helped to learn what is expected of her/him at her/his own pace

- A kit of mathematics teaching learning aids consisting of a wide variety of concrete materials which children can see, touch and handle
- A battery of diagnostic tests and a pool of remedial tasks.

Any teacher education programme must address all the above aspects. A teacher education programme should thus have some component of each of the following :

- Subject competence and enrichment
- Child-centred and multi-level teaching-learning techniques
- Skills for development of teaching learning material
- Ways of carrying out diagnostic assessment and remedial teaching.

Teacher training is not just a matter of training teachers in new concepts and techniques but of changing their attitude to mathematics and towards teaching, particularly in their relationship with children. This cannot be done by imposing ideas but through demonstration of good practices in actual classroom situations.

There is also a dire need of developing a series of modules to enrich subject knowledge of primary school teachers so that they in turn will have the confidence to provide appropriate, systematic and careful explanation of mathematical ideas and procedures to their pupils, with an emphasis on the

development of understanding, rather than mere learning by rote.

### **Integrating Mathematics with Other Subjects**

*Mathematics is dull, drab, boring etc.*, so say, most adults and these adults in turn try to influence or rather impose the views on children. But a child is not born with a grudge for mathematics. It is we who through our presentation of the subject in an uninteresting manner groom the little ones to dislike or avoid mathematics. Mathematics can be really fun, challenging and creative provided the curriculum and its implementation are so designed. We have said earlier in Part I of the document that a child at the primary stage finds it difficult to see subjects in isolation. Therefore every attempt should be made to integrate subjects and provide for holistic learning.

If it is so, why restrict story writing to language periods or drawing to the arts period? Let stories, drama, poetry, puzzles, riddles, games, drawings, colour, dance, music all flow into the mathematics period and before long we will find a highly motivated


and keen mathematics learner! Let children colour their geometrical figures, make patterns in them, write stories on fractions or shapes, write dialogues between two numbers and role play it, solve puzzles, riddles, create games and their rules, write their experiences of mathematics activities, create bulletin boards and carry out innumerable such activities. If all these fun filled activities become a part of mathematics learning, children will look forward to the mathematics period as eagerly as they do to their language, environmental education or arts' period. For example, when talking about "Means of Transport" or "Kinds of Food" in Environmental Education (EVE) let children survey and represent their data pictorially, which is one of the learning experiences of mathematics. When doing a topic on "water" in EVE relate it to measures in mathematics. In Art, let children make geometrical shapes, patterns, paper craft (folding in  $1/2$ ,  $1/4$ ) etc. Let them use their compass, protractor or other geometrical instruments outside the mathematics periods well. The more creative the activities the more enthused will the children be.

### Learning Outcomes (Mathematics)

**The child is able to**

Level I	Level II	Level III
<p><b>Number and Numeration</b></p> <ul style="list-style-type: none"> <li>• arrange the given collections of objects in order (i) by matching and sorting (ii) by one-one correspondence (iii) by counting the objects of the collections</li> <li>• make collections of objects corresponding to the specified numbers (not beyond ten)</li> <li>• place in order and recite number sequence (up to ten).</li> <li>• indicate the position of an object in a line (e.g. Hari is fourth in the line, from the (front/back/left/ right)</li> <li>• make groups of 2s, 3s, 4s, 5s,..... 10s, from a given collection of objects</li> <li>• get familiar with the difference between an ordinal number and the corresponding cardinal number with respect to placement of concrete (e.g. five days of a week and fifth day of the week)</li> <li>• read and write numerals 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10</li> <li>• classify numbers (upto 10) in terms of odd and even, through pairing</li> </ul>	<p><b>Number and Numeration</b></p> <ul style="list-style-type: none"> <li>• read and write numerals upto 100 in a variety of ways</li> <li>• represent numbers up to 100 by bundles of sticks; currency notes of 100, 10 and coins of Re 1; and also by a flat of 100 cubes, a rod of 10 cubes and a cube</li> <li>• extend number sequence to 1000, using a cube of <math>10 \times 10 \times 10</math> cubic rods, currency notes of 1000, 100, 10 and coins of Re 1, spike-abacus, etc.</li> <li>• identify the smallest and the greatest numbers of, one, two and three digits</li> <li>• compare two or three numbers and also express the comparison, using the symbols <math>&gt;</math> or <math>&lt;</math></li> <li>• arrange the given number in ascending and descending order, without and using the symbols <math>&gt;</math> or <math>&lt;</math></li> <li>• round off the numbers to the nearest ten or hundred</li> <li>• add and write the numbers (upto 1000) both in figures and words</li> <li>• form the smallest and the greatest 3 or 4-digit num-</li> </ul>	<p><b>Number and Numeration</b></p> <ul style="list-style-type: none"> <li>• read and write of numerals up to one lakh, (both in figures and words) in a variety of ways</li> <li>• compare and order numbers using sign <math>&gt;</math> or <math>&lt;</math></li> <li>• arrange the given data in increasing or decreasing order</li> <li>• round off the numbers to the nearest ten, hundred, thousand, or lakh</li> <li>• determine the HCF and LCM of two or three numbers, by (i) prime factorisation method and (ii) long division method</li> <li>• cite daily life situations wherein the concepts of HCF and LCM are involved</li> <li>• solve problems based on the concepts HCF and LCM (In the above three outcomes numbers may not exceed 100)</li> </ul>



Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• name number sequence to twenty, through counting of actual objects</li> <li>• read and write numerals upto 20</li> <li>• classify numbers (upto 20) in terms of odd and even, again using pairing</li> <li>• name number sequence upto hundred (by rote) starting from one</li> <li>• name number sequence (forward) starting from any number</li> <li>• understand and expresses numbers beyond 10 in terms of tens and ones (e.g. <math>34 = 30+4</math>, <math>57 = 50+7</math>)</li> <li>• write numbers from 1 to 100 in columns of ones, tens and hundreds</li> <li>• count up to 100 skipping in 10s, 5s, 4s, 2s.</li> <li>• compare and arrange numbers (up to 100) in ascending and descending order</li> <li>• draw a number ray and marks on it the numerals (with equal gaps)</li> <li>• make a <math>10 \times 10</math> grid and writes numerals from 0 to 99</li> </ul>	<ul style="list-style-type: none"> <li>ber from the given digits (with and without repeating the digits)</li> <li>• extend number sequence to ten thousand, using five spikes on the spike-abacus</li> <li>• read and write numbers upto one lakh both in figures and words</li> <li>• compare and arrange the numbers in order</li> <li>• round off the numbers to the nearest thousand</li> <li>• understand the concepts of: factors and multiples of a number; prime and composite numbers</li> <li>• sort out the even, odd, prime and composite numbers that come in between 1 and 100</li> <li>• find all the factors of a number; multiples of a number</li> <li>• make the prime factorisation of a number, using a factor tree</li> <li>• find the HCF and LCM of two or three numbers, by prime factorisation</li> <li>• describe the properties of even, odd, prime and composite numbers</li> </ul>	

### Fractional Numbers

- use active vocabulary related to fractions in her/his conversations in daily life situations e.g., whole, half, quarter, (Give me "half a

### Fractional Numbers

- make proper fractions, such as  $\frac{2}{3}$  taking two pieces each of size  $\frac{1}{3}$ ,  $\frac{3}{4}$  by taking three pieces each of  $\frac{1}{4}$  sizes, etc.

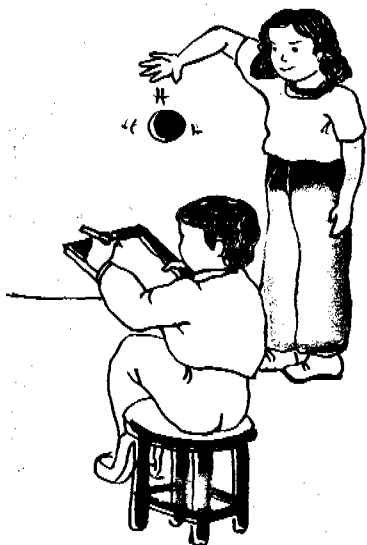
### Fractional Numbers

- represent and explain fractional parts of a collection/group of objects (e.g. half of 6 apples, one-fifth of 20 oranges)

## Level I

chapati", "It is quarter past three", "I want the whole one")

- identify fractional parts of (i) a whole and (ii) of a group using concrete objects, drawing, e.g., (1) colour one half of the square or one quarter a circle, (2) colour three out of four parts of a whole, (3) colour two out of four circles
- make designs and shapes through paper folding into halves, quarters, etc.



#### Four Fundamental Operations

- compose numbers up to 10, using concrete objects (e.g.,  $2+1=3$ ,  $4+2=6$ , etc.)

## Level II

• demonstrate the equivalence of fractions (e.g.,  $2/4$  of a chocolate bar is same as  $1/2$  of the same bar)

• compare and order like fractions (fractions with equal denominators or fractional parts of the same size are called like fractions)

• add and subtract like fractions

• demonstrate understanding of a "mixed fraction" and an "improper fraction"

• convert a mixed fraction into an improper fraction, and vice-versa

#### Four Fundamental Operations

- add and subtract two or three digit numbers—a revision

## Level III

• understand fraction, as division

• generate fractions equivalent to a given fraction

• reduce a fraction to its lowest terms

• calculate a specified fractional part of a collection (e.g. what is  $2/3$  of Rs 270?)

• convert unlike fractions into like fractions, using equivalence of fractions; and then compare/ order the unlike fractions

• add and subtract like and unlike fractions

• develop understanding of decimals and percentages, through fractions with denominators 10, 100, or 1000

• express a fraction into decimal or percent and vice-versa

• express a given measurement in higher or lower units (e.g. 3 kg 235 g as 3.235 kg and 3.12 m as 3 m 12 cm)

• convert unlike decimals into like decimals

• add and subtract like decimals and unlike decimals

#### Four Fundamental Operations

- add and subtract numbers of any number of digits (Column method)

Level I	Level II	Level III
<ul style="list-style-type: none"> <li>• understand that addition is a process of putting objects of two collections together (<i>aggregation</i>) and joining a group by some more (<i>augmentation</i>)</li> <li>• understand that two numbers can be added in any order (commutative property)</li> <li>• decompose numbers, using concrete objects (i.e., <math>8=5+3</math>, <math>7=6+1</math>, etc.)</li> <li>• understand that subtraction is a process of "taking away", using collection of objects</li> <li>• understand the use of <i>number ray</i> (up to 20) to count on, add and subtract numbers along it</li> <li>• make tables of addition and subtraction facts (<math>1+1, \dots, 9+9</math> and <math>9-9, \dots, 1-1</math>)</li> <li>• understand that zero represents the absence of something</li> <li>• understand that :  <math>\text{number} + 0 = \text{number};</math>  <math>0 + \text{number} = \text{number};</math>  <math>\text{number} - 0 = \text{number};</math>  <math>\text{number} - \text{number} = 0;</math>  <math>0 + 0 = 0</math> and <math>0 - 0 = 0</math></li> <li>• understand that subtraction is also "difference between" two numbers</li> <li>• solve problems involving addition and subtraction through verbal presentation of situations interesting to children, involving numbers up to 9 or 10 (sum not to exceed twenty)</li> </ul>	<ul style="list-style-type: none"> <li>• multiply a two or a three digit number by a one or two digits number</li> <li>• a process of "equal distribution" or "sharing"</li> <li>• understand that division is a process of "repeated subtraction"</li> <li>• prepare division facts out of both the processes and vice versa</li> <li>• understand that a number is not divisible by zero(0)</li> <li>• check division facts using corresponding multiplication facts</li> <li>• classify word problems on the basis of four operations</li> <li>• divide a two or three digit number by a number not exceeding 10, using multiplication tables</li> <li>• solve simple word problems involving one or two operations and the numbers not beyond 999</li> <li>• add and subtract two or three numbers of four or five digits</li> <li>• solve problems involving addition or subtraction or both but numbers not beyond five digits</li> <li>• multiply a number (may be of four digits) by a number of two or three digits</li> <li>• divide a number (may be of four digits) by a two digit number</li> <li>• make an estimate of the product or the quotient</li> </ul>	<ul style="list-style-type: none"> <li>• multiply and divide a number by another number</li> <li>• solve word problems involving large numbers and four basic operations</li> <li>• solve word problems involving (1) numbers and (2) different measures</li> <li>• frame problems in her/his own words corresponding to the specific requirement made by the teacher</li> <li>• study a given pattern made of numbers and operations and make generalisations</li> </ul>



## Level I

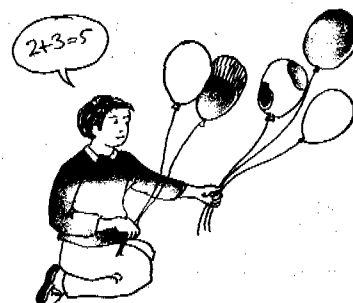
- form verbal problems corresponding to a given addition or subtraction fact of numbers up to 9 or 10
- add and subtract two-digit numbers with and without regrouping (using forward counting,  $10 \times 10$  grid or any other learning aid)
- add and subtract two-digit numbers (column addition/subtraction) with and without regrouping, using addition/subtraction facts
- identify the operation of addition or subtraction involved in the word/verbal problems
- solve word problems involving addition and subtraction, with numbers up to two digits
- understand that multiplication is a repeated addition
- prepare multiplication tables up to 10, using a grid, skip counting, number patterns etc.
- understand that two numbers can be multiplied in any order
- multiply a number directly by 1, 10, 100, etc
- solve verbal problems involving multiplication (emphasizing preference of multiplication over addition)
- form verbal problems corresponding to a given multiplication fact

## Level II

when two numbers are multiplied or divided, in terms of tens, hundred or thousand

- extend a given a pattern made of numbers and operations by few more terms
- generate patterns involving numbers and operations
- estimate the sum, difference, product and quotient of numbers and verify these after working out using operations

## Level III



## Level I

**Shapes**

- develop and use vocabulary of spatial relationships (top, bottom; over, under; inside, outside; etc)
- sort, classify and describe solids and shapes
- observe, describe and continue patterns
- follow and create simple sets of instructions to generate patterns
- recognise basic shapes—cuboid, cube, sphere, square, rectangle, circle, triangle, etc.
- sort objects collected from the environment according to shapes and sizes
- recognise straight and curved lines ; closed, open shapes ; flat and curved surfaces
- make simple patterns and models out of shapes
- discover and narrate simple characteristics of shapes
- draw shapes with the help of objects
- make straight lines by folding, using straight-edged objects, stretched string
- draw horizontal, vertical and oblique (sloping) lines
- draw a straight line with help of a scale or ruler
- draw shapes (free hand) of square, rectangle, circle, triangle
- make patterns and designs, shapes cut-outs

## Level II

**Shapes**


- make shapes of triangle, square, rectangle, circle, half-circle, quarter-circle by folding and cutting
- classify shapes made of line segments and curved lines and name each classification as triangles, quadrilaterals, circles, etc.
- identify symmetrical and non-symmetrical shapes, alphabets, leaves, etc.
- verify symmetry of shapes and designs, using folding
- draw circles of different radii with a compass
- name various terms related to a circle, namely radius, diameter, chord, circumference, etc.
- derive the following relationships:  
 $\text{diameter} = 2 \text{ radius}$  ;  
 $\text{circumference} = 3 \text{ diameter}$  (approx.)



## Level III

**Shapes**

- make distinction between a ray and a line segment
- understand that an angle is made of two rays or two line segments
- classify angles as right, acute and obtuse
- identify angles occurring in various shapes
- measure angles using protractor
- draw angles of various degrees (multiple of 5 degrees)
- understand that a triangle is a closed figure made of three line segments
- verify the property of a triangle, namely "the sum of its three angles is 180 degrees"
- understand that two line segments are parallel if they do not meet at all
- understand that two line segments are perpendicular if they form an angle of 90 degrees
- identify parallel and perpendicular line segments occurring in various shapes and objects

Level I	Level II	Level III
<p><b>Measurement</b></p> <p><b>(a) Length</b></p> <ul style="list-style-type: none"> <li>• compare and order objects by their sizes (<i>e.g. ordering children by height, ordering pencils by length</i>)</li> <li>• use descriptive language: long, short, high, low, tall, wide, deep, narrow, etc.</li> <li>• use comparative language : tall, taller, tallest; wide, wider, widest, and so on</li> <li>• compare and order objects by using linear dimension: longer than, shorter than, etc.</li> <li>• compare lengths, using a single improvised unit</li> <li>• measure lengths, using personal units—span, cubit, pace, etc.</li> </ul> <p><b>(b) Mass</b></p> <ul style="list-style-type: none"> <li>• compare and order masses through visual difference and difference on actual weighing (using improvised units)</li> <li>• weigh with improvised units : cubes, marbles, cotton reels, nails, etc.</li> </ul>	<p><b>Measurement</b></p> <p><b>(a) Length</b></p> <ul style="list-style-type: none"> <li>• measure lengths in standard units of length—decimetre, metre and centimetre</li> <li>• derive relationships among various units of length: 10 centimetres = 1 decimetre 10 decimetres = 1 metre 100 centimetres = 1 metre</li> <li>• select appropriate units and measure variety of objects, using decimetre, metre, and centimetre and provide answers in complete units (no fractional parts) making sensible estimation/rounding off</li> <li>• express a given length in the specified unit, using relationships between various units</li> <li>• convert one unit of length into others</li> </ul> <p><b>(b) Mass</b></p> <ul style="list-style-type: none"> <li>• select appropriate units and measure mass (or weight) of variety of objects, using weights—kilogram and grams</li> <li>• derive relationships between two units of mass 1000 grams = 1 kilogram Two 500 grams = 1 kilogram Five 200 grams = 1 kilogram Ten 100 grams = 1 kilogram</li> </ul>	<p><b>Measurement</b></p> <p><b>(a to c) Length, Mass and Capacity</b></p> <ul style="list-style-type: none"> <li>• state various metric units of length, mass, capacity, time and relationships among them</li> <li>• convert one unit into another</li> </ul>
		

## Level I

## Level II

## Level III

**(c) Capacity**

- compare capacities of different containers by finding out how many smaller containerfuls are needed to fill bigger ones
- understand the meaning of "capacity" of a container—the quantity of liquid or sand it can hold
- estimate the capacity of a container and verify the same by actual measuring
- measure and express the capacity of a container using improvised units such as bottle cap, cup, glass, jar, katori, etc.
- arrange in order vessels of different capacities

**(d) Time**

- name the *days, months* and *seasons* (stories and rhymes about the seasons)
- understand that the days of a week are in cyclic order
- name the days of a week and months of a year in sequence
- make appropriate use of *tomorrow, today, yesterday*
- read a clock and tells time

- select appropriate units and weigh variety of objects, using kilogram and gram weights
- convert one unit of mass into others

**(c) Capacity**

- understand that two vessels of same size and capacity if filled with objects of different densities may have different weights
- use appropriate units of capacity—litre and millilitre while measuring the liquids such as oil, water, milk, petrol, etc.
- measure the capacities of vessels of different sizes, using vessels of 1, 2, 5 litres, and 500, 200, 100 millilitres
- convert one unit of capacity into others

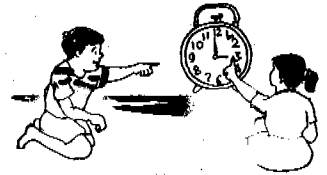
**(d) Time**

- cite time events/ activities which are completed in one or more minutes (but less than an hour)
- make use of the relationships:  
 $60 \text{ minutes} = 1 \text{ hour}$   
 $30 \text{ days} = 1 \text{ month}$   
 $7 \text{ days} = 1 \text{ week}$   
 $12 \text{ months} = 1 \text{ year}$ 
in expressing the duration of an activity in hours

**(d) Time**

- calculate the duration of an activity or event, using clock time or calendar
- understand that the smallest unit of time is the second (and duration of one second is enough both for achieving a success and disaster), and its relationship with a minute  
 "1 minute = 60 seconds"
- understand the concept of

Level I	Level II	Level III
<p>in hours, half hours, quarter hours</p> <ul style="list-style-type: none"> <li>• associate hands of clock with regular happenings in the classroom (start of school, play time, lunch/recess, closing time)</li> </ul>	<ul style="list-style-type: none"> <li>• state the time of various events or happenings by reading 12 hour clock and digital watches</li> <li>• express the instant time in <i>a.m.</i> and <i>p.m.</i> (Raj goes to school at 7 a.m. and he goes to bed at 9 p.m.)</li> <li>• read and interpret a calendar</li> <li>• calculate the duration of an activity/event when the beginning time and finishing times are given in a.m. and p.m.</li> </ul>	<p>speed and its relationship with distance and time</p> <ul style="list-style-type: none"> <li>• read the bus and railway time tables and make use of them</li> </ul>



**(e) Money**

- recognise coins and currency notes up to 100
- make amounts with coins

**(e) Money**

- solve problems related to money

**(f) Perimeter and Area**

- understand the concept of "perimeter"
- measure the perimeter (boundary) of *simple* closed figures (i.e., of figures which are closed and don't intersect themselves)
- measure area of regular and irregular shapes using 1 cm square paper or geoboard
- derive formulae for finding the perimeter and area of a square and a rectangle
- determine the perimeter and the area of a square and a rectangle with given dimensions



Level I

Level II

Level III

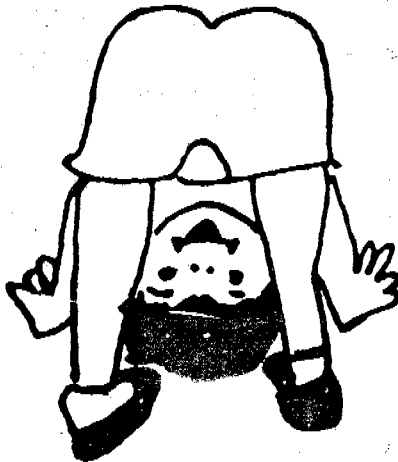
**(g) Temperature**

- read a thermometer (Celsius and Fahrenheit) and find out the temperature
- know the range of temperature in environment (weather, body, boiling freezing points)

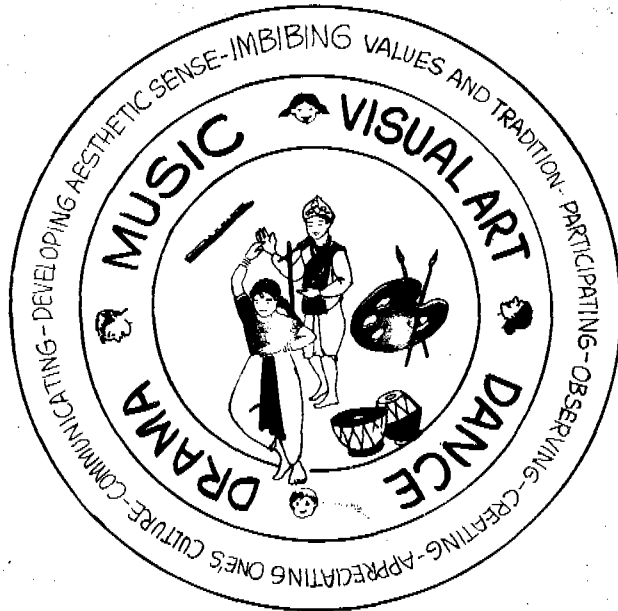
**(h) Volume and Surface Area**

- understand the concept of "volume" as the amount of space an object occupies
- find volume of cuboidal and cubical containers by filling in with unit cubes
- see a cube as the most suitable unit for the measurement of volume
- derive formulae for the volume of a cuboid and of a cube
- calculate the volume of a cuboid or a cube of given dimensions
- understand the concept of surface area of an object/solid and calculate the surface area of the objects
- calculate the surface area of the four walls of a room
- cite difference between **volume** and **capacity** and the use of the basic units *litre* and *cubic centimetre*
- know the relationship :  
 $1 \text{ litre} = 1000 \text{ cubic centimetres}$
- estimate, measure and record the errors in each type of measurement

Level I	Level II	Level III
<p><i>Graphs</i></p> <ul style="list-style-type: none"><li>• identify and interpret simple symbols, pictures etc.</li></ul>	<p><i>Graphs</i></p> <ul style="list-style-type: none"><li>• represent and interpret simple data collected through other activities with the help of the teacher</li></ul>	<p><i>Graphs</i></p> <ul style="list-style-type: none"><li>• collect and record data systematically</li><li>• represent data concretely and pictorially</li><li>• answer posed questions, using data and its representation</li><li>• describe data orally</li><li>• interpret information given in tables and pictorial representation</li></ul>



5



# Arts Education

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## Introduction

**L**ET US IMAGINE a situation in which a small child is sitting all by herself/himself with a chalk in her/his hand, and no one around to tell her/him what to do? What do you think the child is likely to do? Will she/he write numbers and alphabets with the chalk or will she/he scribble circles or figures? More likely the latter. Expressing through an art form comes naturally to a child. Every child is a potential artist and all art forms provide a satisfying medium for a child's creative expression and thus contribute significantly to her/his all round development.

Young children have an inborn desire to know and to express what they feel or experience in every possible way. They babble, cry, speak and sing. They move, jump and dance. They scribble, make lines, draw shapes and pictures. They experiment with colours and play with surfaces having different textures. Thus, if given a wide variety of opportunities and

materials and the freedom and time for discovery, children will experiment to express in various ways what they need to say.

Art experiences also help develop in children the sensitivity for beauty and aesthetics. We know that children appreciate colours, shapes and open spaces. Arts help children to see the beauty around them, both inside the classroom and outside (e.g. children can be asked to look out of the window and see colours outside, and plan how they can use these colours to change the classroom environment).

Art activities can promote creativity in young children. Teachers can provide ideas, environment, materials and opportunities to help children to explore, experiment and follow their own artistic ideas.

Nature has given five senses to humans to see, taste, hear, touch and smell. Art education can strengthen these through interaction with the immediate, friendly and motivating surroundings.

## **Major Concerns in the Area of Arts Education**

The National Curriculum Framework 1988 reads, "At the primary stage the main objective of Arts Education is to make the child aware of the good and beautiful in her/his environment and to express her/his feelings through simple performing arts like music, dance and drama...". However, in reality what is seen is far from the above objective e.g. :

- The definition of Arts Education is often limited to drawing, painting or singing alone whereas it should be seen as an integrated learning experience involving different art forms, such as music, dance, drama, puppetry, painting, sculpture, pottery, print-making etc.
- Arts Education is a process which starts with child's play which is a natural part of child's development process. Play in turn can extend into various forms of art with some orientation and directions. Emotions and feelings when developed into enactment, narration, characterizations etc. lend themselves to performing arts. Sensation of textures, forms, shapes, quality differentiation etc. can be developed into visual arts. Rhythmic motions and sounds could easily be translated into music or dance. All the above are often overlooked while planning and implementing curriculum for arts education.

- Children's spontaneous responses are rarely encouraged and the curriculum tends to become very directive and teacher centred. As a result there is no opportunity for the child to respond/ react in creative ways or to find an emotional outlet through arts activities.
- The significance of the arts in facilitating learning in other curricular areas has still not been explored and practised in classroom situations. Keeping in view the developmental characteristics of children in primary education, possibilities of adopting integrated approach to teaching need to be explored more vigorously.
- Arts Education plays a crucial role in fostering the child's skills of visualisation, adaptation and co-operation in thinking and doing which in turn can help the child face the challenges of the fact changing world. But unfortunately the existing pattern of arts education does not take this fact into consideration. Conscious efforts need to be made by all concerned including the teacher in this direction.

## **Objectives of Arts Education**

A properly planned curriculum in Arts Education should aim at :

- **sharpening the child's capabilities of observation through seeing, hearing, touching, and**

**smelling.** Through observation and exploration of her/his surroundings, the child acquires a first hand experience of the world. This experience is unique to every child. The process of observation needs to be nurtured and enhanced to foster the individual's creativity from early stage of education.

- **developing the skills of free expression of ideas and emotions, imaginatively and creatively.** The child has an instinctive need to express her/ his feelings, emotions and ideas. Arts Education serves to develop the child's skills to express imaginatively and creatively through different materials and media (music, dance, drama, painting etc.).
- **developing in the child aesthetic sensibilities and an awareness and appreciation of all forms of art through an integrated learning experience.** The child through participation in activities of different forms of art education discovers in her/his immediate surroundings relationships, order, harmony, beauty, rhythm etc.
- **developing the child's understanding of the world around.** Arts Education helps the child to appreciate diversity and be tolerant to others' view-points which can contribute in a big way in developing the quality of 'learning to live together' and 'learning to be'.

- **developing in the child a sense of pride in her/his cultural heritage.** Art education helps the child in familiarisation with traditional arts, crafts, folk songs and dances etc. and appreciate their significance in her/his life.

### **Scope of Arts Education**

The scope of Arts Education therefore includes both Visual Arts and Performing Arts.

*By Visual Arts we mean —*

- drawing and painting
- collage and applique
- sculpture
- pottery
- print making
- constructions, hangings and mobiles
- masks, puppets and toy making
- tie and dye
- display and decoration
- rangoli
- other art activities

*By Performing Arts we mean —*

- music — vocal and instrumental
- dance — folk, classical, rhythmic movement etc.
- drama — stage, puppetry, street plays, mime, mask play etc.

By **arts** we do not mean merely putting up a performance on stage or a

display. We essentially mean a process that begins with free play and grows through a series of graded learning experiences as a direct outcome of doing and thinking.

This process of creative play must be retained throughout Arts Education to ensure the child's spontaneous and joyful participation in visual and performing arts, as also while learning other subjects. Within the proposed curriculum, creative activities should not be limited to only a few students but can be developed in all. The focus is on a harmonious overall development of the child through an integrated and holistic approach within the arts as well as with other curricular areas.

Lesson plans must be devised in such a way that creative processes can fully help understand and imaginatively reinforce the concepts taught in other subjects.

Arts Education goes beyond skill building because it broadens the child's view of her/his own world in several ways. It is a very critical area of a child's education. Given the broad perspective of Arts Education the allocation of time has therefore been increased from 10% to 15% at the primary level.

### ***Creating an Environment for the Arts Education***

There is no one method of conducting creative activities with children in a

class. Arts Education is more concerned with the creative processes rather than the end product. Here the teacher's role and attitude is of paramount importance which is reflected in the kind of environment created in the classroom. An arts class should provide for:

- **A democratic environment**

The child's idea of painting is not to make a pretty picture. The child's excitement lies in smearing and splashing colours and discovering what her/his act leads to. An ideal open ended introduction to the activity would be, "Here, take these colours. You may choose to paint anything you like and use your fingers, brushes or anything else to do so."

- **Open ended activities**

Arts activities cannot be definitive. Every activity has to be an open ended activity, providing the child the flexibility to experiment, explore and not to be bound by the teacher's prescriptions. Likewise, the choice of materials, organisation of space and adequate time must be taken care of. Art activities must be allotted sufficient time for the children to be able to complete their tasks. As the child gets absorbed in the activity, an abrupt end can leave the child feeling dissatisfied and restless which can affect her/his sense of accomplishment.



- **Open ended materials**

The choice of art materials can be a major source of interest and inspiration. By selecting exciting materials for visual arts and exciting activities for the performing arts, one can inspire the child.

- **Open spaces**

A motivating environment is also inspirational. Arts being a messy, noisy business for children, the space provided must not be limited. In the schools the emphasis is on indoor learning. The very idea of moving outdoors is a liberating factor for the children. Improvising materials and spaces within and around the school can facilitate arts activities.

- **Catering to the child's developmental level**

For effective implementation of the curricula, the arts activities must address the needs and requirements of a particular age group as there is a definite sequential pattern in the development of a child's ability to express in visual terms. Activities should be formulated keeping this pattern in mind.

In the first stage of development (i.e. 1½ - 4 years of age), the children explore and investigate through body-related movements. This is the scribbling stage. Marks are made at random without any meaning or design. The response to colour is not con-

scious or intentional. As the movements grow more rhythmical through repetition and coordination, the scribbles extend into linear formations — wavy, zig-zag or circular, corresponding to the muscular/ motor development of the child.

In the second stage of development (4-6 years of age), a relationship between what a child perceives and begins to express is established through the medium of art. Children at this stage develop their own symbols for everything e.g. dots for eyes etc.

In the third stage of development (6-8 years), the children arrive at their own symbols for everything that is important to them. The knowledge/understanding of the concept when translated in repeated movements gives the children a feeling of confidence that they 'know' the object.

In performing arts, creative play begins from child's make-belief activities which takes the inspiration from observation of her/his surroundings (people, places, animals, objects and events).

The teacher thus has to observe the children of different age groups to develop lesson-plans according to their levels. In addition, factors such as the cultural background, geographical location, exposure, locally available resources could vary tremendously and need to be kept in mind.

### **Assessing Children's Art Work**

Since every child's work is unique and should not be compared with others, assessment becomes a very complex issue. There is no ready-made yardstick for assessing children's art work. As each child expresses as per her/his inherent ability and perception, the best in her/him needs to be harnessed and nurtured.

Expression itself is a matter of drawing out and identifying the most potent, symbolic and urgent images or feelings. Therefore, the child requires nothing more than positive encouragement in a congenial environment. A child's work must always be met with enthusiasm.

A sense of belonging can be developed by giving each child a specific space for display. Displaying her/his own work develops in the child a sense of pride and accomplishment. In this way the child learns to analyse, evaluate and discuss the works on display. It offers the child not only multiple viewpoints and alternate techniques but also a forum for social interaction in a group activity.

### **Integrating Arts with Other Curricular Areas**

As discussed in Chapter 2 of The Primary Years Part I, the child at this age perceives the world around her/him more holistically rather than in isolated segments. Keeping this char-

acteristic in view, the adoption of Integrated Approach to teaching learning needs to be experimented in different situations and forms. It is essential for harmonious and all round development of the child's personality.

Performing arts brings about a natural integration of different forms and modes of expression like—music, dance, drama, visual arts etc. A greater emphasis on performing arts will ensure simultaneous development of all forms of expression. In addition, from the list of activities/ready to use teaching ideas which follow, it comes out very distinctively that the arts can be integrated with other curricular areas as well. An integrated approach to teaching learning within the different art forms as well as with other curricular areas would make arts more interesting, captivating and meaningful for the child.

### **Ready-to-use Teaching Ideas**

An attempt has been made to provide some activities and related to specific objectives as exemplar material for planning Arts Activities for children.

Objectives and activities have not been classified keeping the nature of the subject in mind. However, activities for levels I, II, III will differ basically in terms of complexity of experiences provided to the children. It is expected children will respond to any activity according to their own capability and interest.

When using any material for Arts, care should be taken to ensure that the materials are harmless.

### Stimulating the Senses — Integrated Approach

#### Feeling the environment

#### Objectives

- Appreciation of colour, forms and surfaces in the environment
- Experiencing and responding to the surroundings
- Familiarizing with the traditional arts and crafts

#### Activities

- The children can be taken for a walk in the park or any natural surroundings to look around, pick and collect pebbles, seeds, leaves or other interesting objects; feel the breeze, the sun, the shade of the trees, chase the butterflies, mimic birds etc. The children can then display, arrange and admire



the things collected from the walk; draw what they saw; express through actions/facial expressions how they felt during the outing.

- The children can be asked to explore their surroundings to observe the flora-fauna, geographical features, etc. and represent these observations in visual and performing arts.
- The teacher can organise visits/picnics to nearby places of historical interest/market centres/local occupational places/crafts-persons/museums and art galleries etc. She/he should plan for a specific activity with reference to the defined outcomes before going on the visit. The visit can be followed with any of the following activities — drawing, discussions, write-ups, enactments, documentations, story writing, narrations etc. At times it is not necessary for every visit to be followed by an activity. It can be left at the feeling stage only.
- The children can be asked to observe and participate in celebration of various festivals. In various cultural/arts activities such as *alpana*, floral decorations, collective activities of music/dance/enactments etc. They can also participate. (This should not be turned into a structured play or performance, but a free celebration and collective participation must

be aimed for). An ambience/environment/relevant mood must be created through a variety of means—songs, dances, story telling, enactments, special decorations, costumes, ornaments, floral painting, designs etc. The children can also be asked to observe local/regional/national differences in various cultural/arts activities

## Exploring Visual Arts

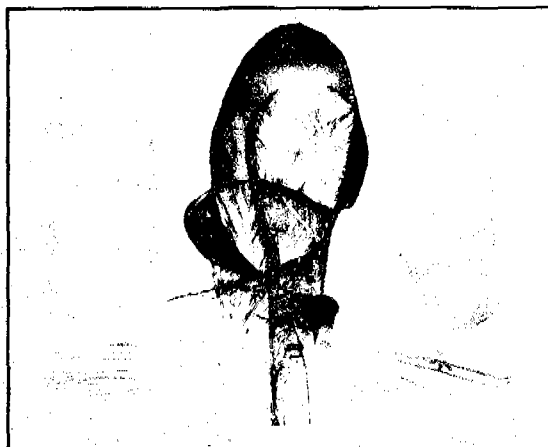
### Objectives

- Developing motor skills in children through exploration and handling of materials.
- Developing colour, shape and texture associations.
- Developing skills of discriminating figures and ground perceptions.
- Fostering creativity, generating one's own patterns, designs, figures etc.
- Developing a sense of planning, visualization and presentation.

### Activities

- **The children can be asked to** make ink or colour blots between folded sheets of paper; blow ink with drinking straw on paper; (Could extend into a group activity); read images from accidental shapes and extend them into drawings or paintings.

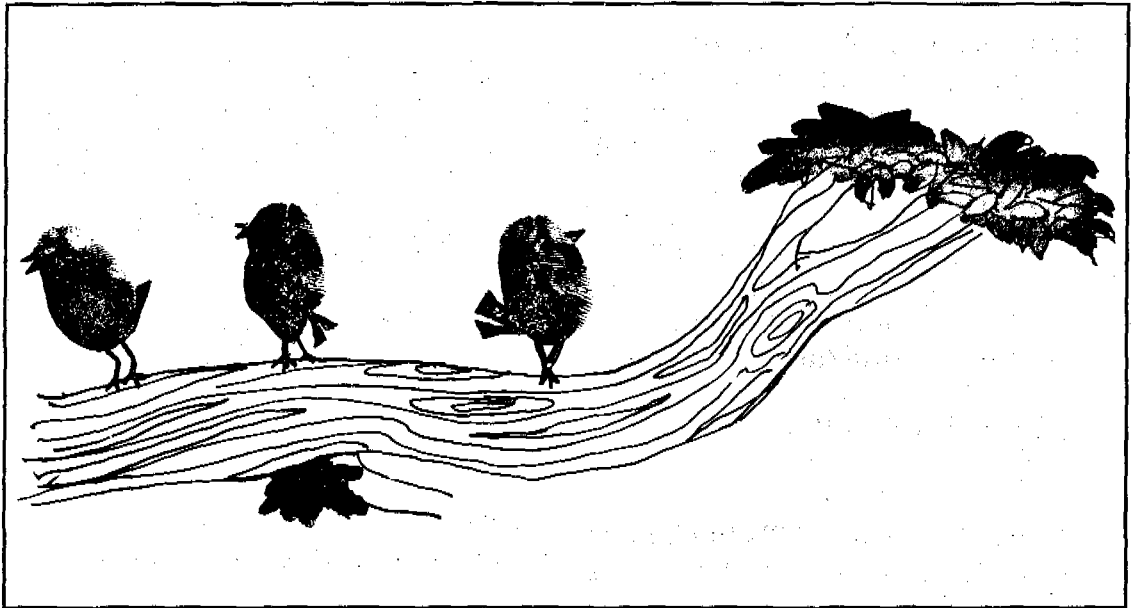
**Materials required:** Sheets of paper/



newspapers spread on ground or table; one or more colours slightly thick in consistency; ordinary ink or water proof inks or any other thinned and easy flowing colour found locally (like chalk powder, *gerru*, etc.)

- **(a) The children can be asked to** draw on mud with sticks; make a hole in a bag filled with white or any other powdered colour; and draw images on the floor; scribble freely, draw what they like—seen or unseen; play with wet paints; make finger paintings and hand impressions; smear, drip, rub, pour or spread colours with small sticks or any linear object. (These activities can be done in groups).

**Materials required:** Any mud or sand surface, (sprinkled with water if it is hard) twigs, small branches for making marks or drawings; *rangoli* colours, ordinary chalk powder, *gerru* etc.



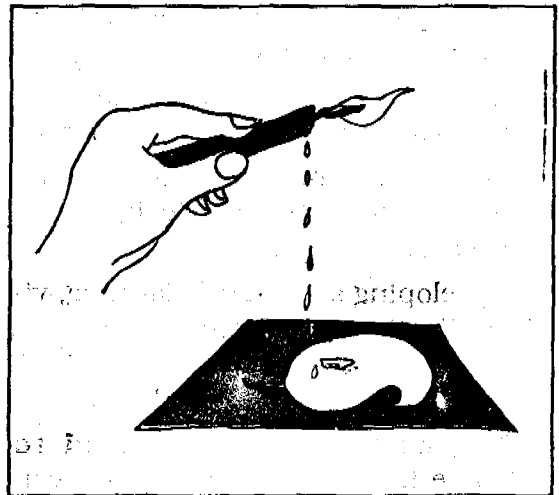
- **The children can** tear a shape out of any coloured paper and paste it on a sheet of paper and draw on it. They then can relate the shape to anything they see around or imagine.

**Materials required:** Plain sheet of paper and coloured paper or used old fabrics.

- **The children can** (a) do resist paint i.e. rub wax on paper and paint with colours on it; (b) make patterns with candle wax drippings and fill in wet colours.

**Materials required:** Ordinary wax / crayons, candles, poster colours or any locally available wet colours.

- **The children can be asked** to maintain a sketch book. Sketches



from life situations must be introduced—like those of school buildings, trees in the garden, children in the corridor, etc.

**Materials required:** Paper/sketch book, pencil, pen and ink.

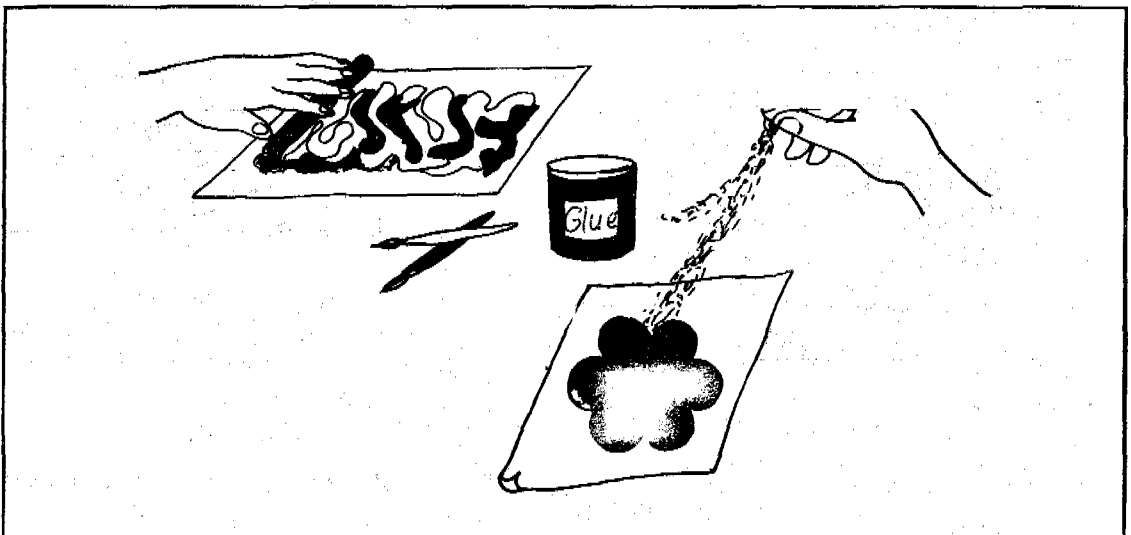
- **The children can be** introduced to elementary perspective. i.e. how things look from near and far, what happens to their size, surfaces, shapes and colours, the farther they are placed in space.

**Materials required:** Paper, pencil, pen and ink, pastel colours, water colours.

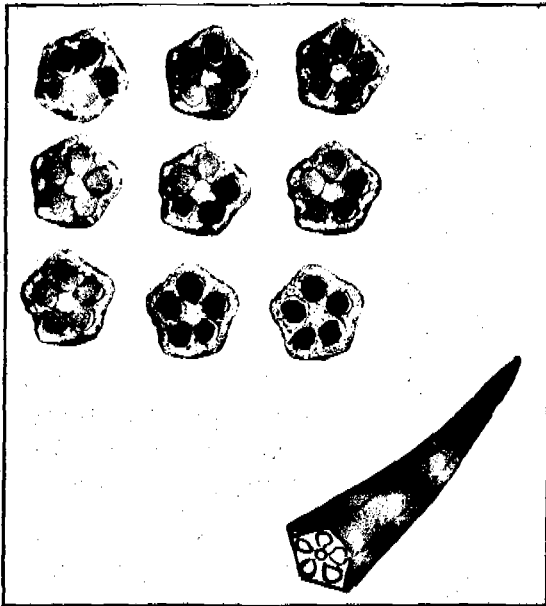
- **The children can be involved in** paper dyeing or fabric dyeing, simple origami/paper-folding, crumpled paper dyeing and tie and dye. They should be encouraged to use local dyes like beetroot, onions, *haldi*, *henna*, *kattha*, *neel*, *harshingar*, *tesu*, *palash* etc.
- **Drip and Drop/Flocking:** The children can drip glue and draw or spread it with stick on paper; pour sand or glitter or powdered colours and shake excessive sand or glitter or powdered colour, after a while.

**Materials required :** Paper, glue, sand or powdered colours.

- The teacher can evolve a graphic dialogue between one or more children. It can begin in a free, playful and stimulating manner where one child draws something and the other child extends it. Thus the dialogue begins. At times, one child leads and at times the other, resulting in a painting or drawing of a narrative sequence.
- **The children can be asked to** collect different kinds of materials with different surfaces and textures; display them and discuss; make simple rubbings of different textures; make a large collage and display.
- **The children can** take impressions of hands and feet on paper; take any textured material — gunny bags, leaves, tree barks,



ropes, wool, crumpled paper, etc. and take their impressions on papers using wet colours; use vegetables like potatoes, lady's finger (bhindi) kamal kakri, etc. and print their own design on paper using wet colours; print their own book covers or cards etc.



- **The children can make their own printing block** on any surface ( stone, wood, paper) by gluing various materials like threads, seeds, sand, wire, stones cereals etc. They can print their own **design** on paper using wet colours/ on fabric using fabric paints.

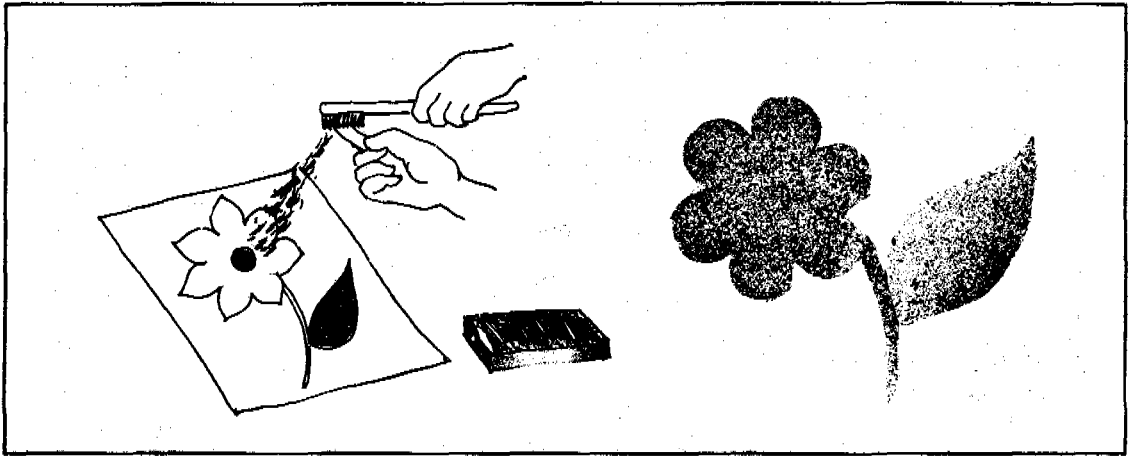
**Method:** On a piece of wood or stone while using fevicol or any other glue that does not dissolve in water, children stick threads, seeds and, mine

stones, cereals etc. or any other material in a pattern or motif to be printed. This would become their **printing block**. They can also prepare a **printing pad** with layers of coarse fabric/ gunny material/blanket, felt material or sponge and spread fabric paint on top. The design can be by stamping the block on fabric or paper.

- The children can print their book covers and different kinds of designs with one or two blocks or print borders for a saree or motif for their T-shirt, or even print their stationery, posters, folders etc.
- Stencil/printing : **The children can** use any available object with holes or outlets like a sieve or create holes and shapes in a piece of cardboard/ thick plastic sheet/ large thick leaves/palm leaves, plantain leaves. To make a stencil design, pour sand or coloured powder, or dab paint with a piece of rag or spray it with an old tooth brush. Soft crayons and pastels can also be used for making stencil design. The stencil can be used to make a greeting card.

**The children can** make stencils of different shapes, animals, objects, leaves, flowers, alphabets, different parts of the body etc.

- **The children can** be asked to illustrate a story chosen with one or two characters or combine several characters by sharing the stencils; make name plates and sign boards



for the school or make a card; arrange alphabets into a design. They can also combine different shapes and colours into a composition, design a scarf, handkerchief, cushion etc.

- **The children can** also compose or put together on paper a variety of materials like wool, coloured sawdust, *cereals*, seeds, paper, petals, pencil shavings, groundnut peals etc. and bring out a collage for display.

### Material Explorations

- **The children can** discover from the surroundings, various kinds of paper, fibre, fabrics or any other locally available materials e.g. cane, bamboo, wood, etc.; arrange them in some kind of order—from rough to smooth, from light to heavy, etc.; observe, discuss and discover from the surroundings, the various uses of these materi-

als (making toys, bags, or other articles of use); collect and display the various samples collected; create their own things while using any one or more materials.

Another activity could be identification of colours through games, like touching the colours called out by the teacher. Following is example of another game.

### Game: Tippy Tippy Tip Toe, what colour do you want?

In this game, one child is chosen the leader. All children sing out in union "Tippy tippy, tip toe, what colour do you want?" The leader replies "I want red or blue or \_\_\_\_\_". Children run to touch the object of that colour. The first to touch becomes the leader.

- The children can be asked to collect different shades of any one colour of their choice in a variety of materials—natural or man made e.g. twigs, leaves, barks, flowers,



stones, mud, wire, yarn, fabric. They can then arrange and compose a design/shape on a sheet of paper, display and discuss the different tones of colour; different intensity and reflections of colour; the **physiology** and **psychology** of the colour (physical and emotional impact of colours).

- Introduction to the colour wheel and mixing of colours (explorations).

The children can be asked to explore with **vibgyor** through — soap bubbles/prism/colour wheel; make their own colour specials using coloured and cellophane paper; explore colour reflections through lights.

### Create an Art/Special Corner for Display

- **Children can** collect things which they consider precious and display in a corner of the room and discuss why it is so special to them. Collection and display can be theme based also.
- **Children can** arrange display of images and objects related to themes like — photographs, handicrafts, environmental issues, festivals, personalities, places etc. This can be followed or accompanied by discussions, enactments, documentation, etc. Children can be encouraged to maintain a scrap book and sketch book also.

Themes should be chosen according

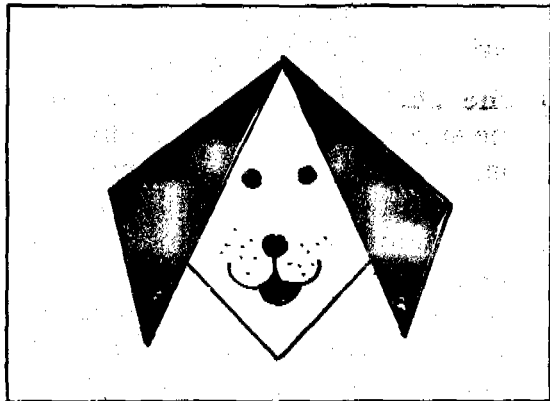
to the relevant age group. Some suggested themes are favourite things, summer holidays, favourite festival, favourite pet etc. The children can be asked to think in small groups in terms of layout/design/calligraphy/innovative ways of presentation and display in the corner.

**Materials required** : Scrap book, glue, images and selected actual objects.

- **Children should** be encouraged to make collections of— stamps, coins, cards etc. These must be occasionally displayed and the children should be encouraged to talk about them. It could also be a group activity.

### Mask Making

- The children can be asked to use paper bags, paper plates, large leaves for making masks. They can draw simple shapes (round, oval, square, rectangle, triangle) and paint eyes, nose, mouth etc. They may stick out their tongue and



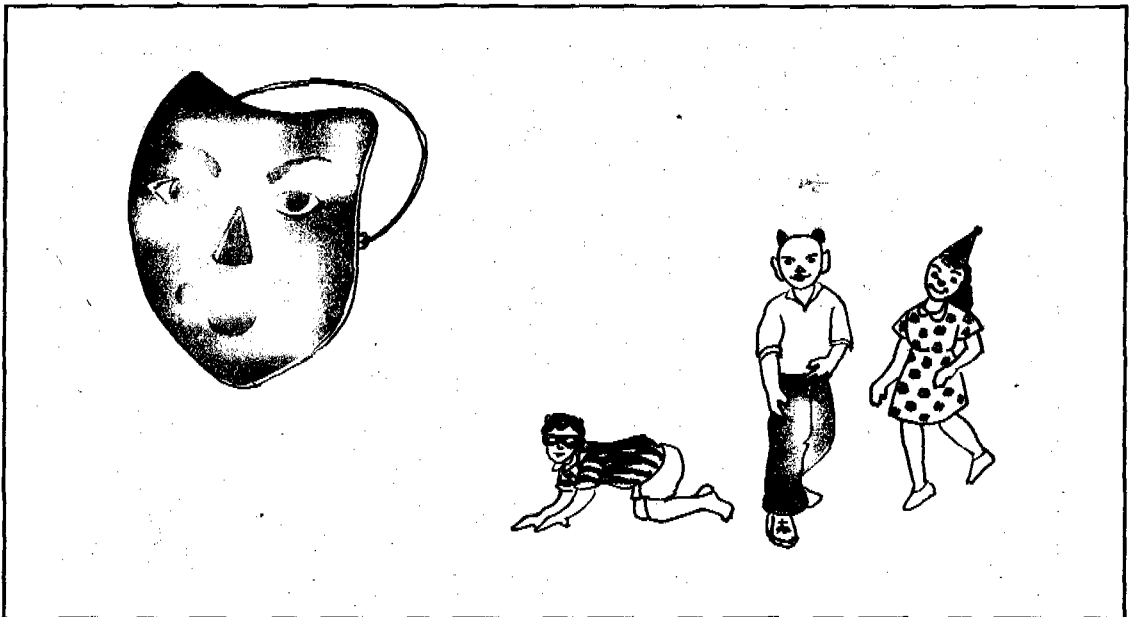
twitch their nose in the masks. The mask can also be made by cutting/tearing the material and making holes to indicate eyes, nose and mouth.

**Materials required :** Paper bags, paper, colours, (poster or indigenous, pastels, pencils, cloth pasted with fevicol or starch on the paper, large leaves, strings, sticks, glue or home-made starch.

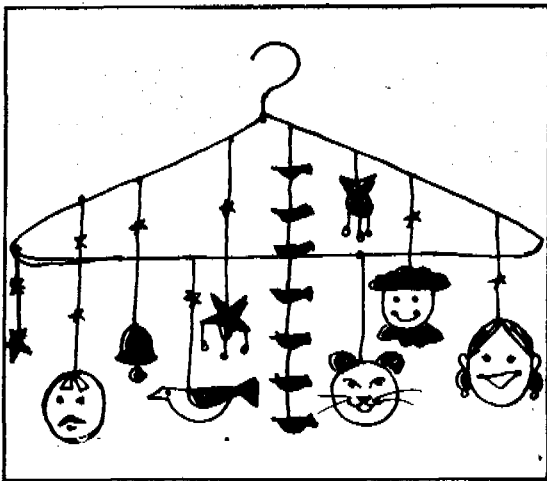
- The teacher can ask the children to explore what they can do with facial expressions; they can mimic characters, animals, or reflect simple expressions of sadness, anger, etc.; they can wear different kinds of masks and create and act out situations; they can observe the face, particularly the
- eyes, eye brows and the curve of the lips to identify emotions on masks.
- The teacher can ask the children to observe the animals in the surroundings or the zoo to find out the basic shapes of their heads (oval, heart shape, pear shaped, etc.); observe the shape and slant of the eyes, shape of the nose, shape and curve of the mouth and other details; draw and paint them; observe and make tails and paws of the animals; use them along with the masks. They can also play games like, 'Pin the tail' etc.

### Toys and Puppet Making

Children can be engaged in play as



well as making of different kinds of puppets like glove puppets, stick puppets, string puppets, shadow puppets, animal puppets, pyjama puppets, box puppets, cone puppets, finger puppets, etc. They can be encouraged to make their own toys out of commonly available things like rubber slippers, soft toys, various kinds of rattles, mobile hangers, etc. Teachers and children can likewise identify, collect and attempt to make various locally available toys. These toys can be examined in terms of the various scientific principles applied. They can also be encouraged to create their own play/drama with the use of puppets and masks.



**Some other activities can include** paper folding (origami), decorations, making jewellery/costumes etc.

The activities should be chosen keep-

ing the age group and the ability levels of the child in mind.

**Materials required:** Paper, glue, fabric, or any other unconventional material.

### 3-D Constructions and Expressions

- The teacher can encourage children to explore various muscular activities like pinching, squashing, coiling, rolling, pulling etc. with soft pliable materials like clay, plasticene, paper mache, m-seal/*putti*, plaster, chalk powder/*atta* with starch paste/*fevicol*/glue; make simple impressions with different kinds of objects like coins, bottle caps, stones, seeds, etc.
- Using a variety of materials like clay, plasticene, paper mache, paper fabric, m-seal, *putti*, plaster, chalk powder or any other natural material, like twigs, leaves, stones, feathers, etc., the children can (a) make simple 3-D constructions with or without a theme; (b) make models — cut-out figures, mobiles, etc. related to a theme; (c) can undertake environmental projects like organising space games around the school, improvising swings and ladders with available objects like old tyres, ropes and branches, suspension bridges for fun and activity etc.

## An Introduction to Music

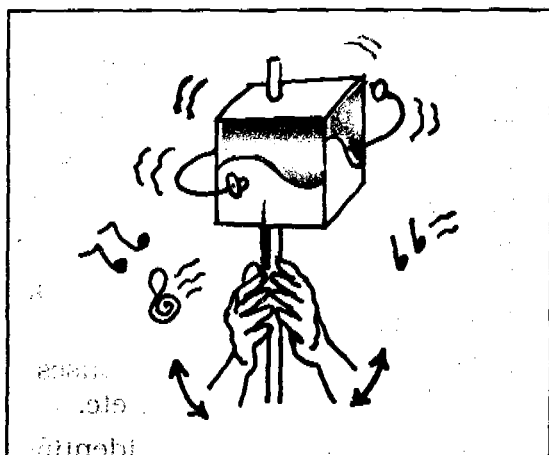
### Objectives

- Listening and discovering sounds in nature
- Articulating variety of sounds
- Understanding relation between sounds and emotions/sounds and materials
- Understanding of elementary rhythm
- Appreciation of music and its relationship with emotions and other contextual factors

### The children can be asked to

- shut their eyes and listen to hidden/inner body sounds like the heartbeats, the rhythm in breathing, the sounds through the wall, sounds from the sea-shell etc. and differentiate between them;
- identify and express in suitable ways a variety of sounds heard in their surroundings such as: (i) animals and birds ii) hawkers like *sabziwallah*, *chaiwallah* etc. (iii) animate and inanimate things like the wind, the rain, the trees, thunder of the clouds, the cooler, the fan, the blacksmith's hammer etc.;
- identify qualitative differences, in sounds like the soft or harsh sounds, gentle or shrill sounds etc.;
- match the sounds with different colours/ textures/moods;
- identify the progression in sounds from high to low, from slow to fast, from near to far etc. and express it;
- identify and express different kinds of sounds specific to a place and its activities, like a railway station, a market place, a temple, a party, a car workshop, a factory etc.; paint a soundscape of the same or express through colours / textures the sounds experienced in a given environment;
- create a variety of sounds with different materials like paper, broom, fabric, seeds, body, metals etc.; and turn it into a game. The children can also be asked to shut their eyes and guess the materials from its sound.
- identify any one material and improvise a whole range of sounds with it; turn it into a game with one child blind folded and other children creating sounds in different ways one by one. The blind folded child should guess how the sound was made e.g. crush, blow, stamp wave, flutter etc. of a sheet.
- create sounds to express without using words, anger, happiness, tension, exasperation, discomfort, pain etc.
- try and create a situation of panic, an accident, a celebration etc. It can be turned into a game with two children through use of nonsense language or just creating a dialogue with sounds made from different materials or gibberish language and other children interpreting the dialogue.

- create a variety of sounds by using varied materials to express the fluttering of wings, the roar of a wave, the rustling of the trees, the wind etc.
- identify different kinds of local toys that make different kinds of sounds to understand the underlying principle in the working and the making of the toy.



- improvise various instruments using objects found in the surroundings like rattles made of tin, match boxes with seeds or stones, whistles from leaves or paper, mouth organ with paper and comb, flutes with different kinds of hollow pipes, etc. balloon stretched over a can, or strings stretched to create sounds etc.; turn into a game where sounds from each of them are organised in a linear rhythm or to an orchestra effect. The children can also play the

improvised instruments to a given song or tune.

- sing and improvise simple rhymes. They can add to the rhythm with claps or body movements.
- to explore a variety of sounds they can create, turn them into a game with one child making a sound and the other children in imitating it, turn by turn and creating a linear rhythm.
- the teacher can ask children to explore — a musical pattern (a tune) in a variety of tones (harsh, high, shrill, soft, distant etc.) turn it into a game of musical dialogue in which one child sings out to another child and the other child answers in a similar sing-song manner;
- recite rhymes on a given subject; accompanied with beats and body movements;
- stamp or clap in single, double, triple speeds in 3 rhythmical patterns e.g. 1,2,3, pause and repeat.
  - a) 1 2 1 2 3 pause and repeat.
  - b) The children create their own rhythm patterns.

The rhythmic pattern can also be created by beating sticks, stones, voice manipulations, whistling etc.

### Introduction to simple sargams

Children can be asked to

- (i) sing a variety of local/folk, traditional/community/festive/

patriotic/devotional songs/regional songs etc., (ii) play a variety of available instruments.

- listen to a variety of music/ both vocal as well as instrumental, like folk/classical/patriotic/festive/devotional etc. Performance by professional artists can also be arranged.
- the children can be introduced to ragas through anecdotes or interesting details like time of year/ person/mood/emotion/colours/imagery/ songs based on the ragas etc.

All varieties of music should be introduced as an extension of life and its activities e.g. how a regional song sung during the harvest season describes in words, notes, beat and emotions, the link with the activity and what it means to them.

### **Introduction to Dance/Drama**

#### *Objectives*

- Awareness and appreciation of body, space and rhythm
- Expressing emotions through body language
- Sensitization to and dramatization of various situations
- Sensitization to rhythmic body movements and expressing and emoting through body

#### *Activities*

#### **The children can be guided to**

- explore the movements of different

parts of the body, like stretching, bending, rotating, relaxing etc. Each part of the body to be taken turn by turn — the head, the shoulder, the chest, the elbows, the wrists, the fingers, the knees, the waist, the ankle and the toes. Children could stand in a circle and do the movements to a beat or rhythm;

- explore movements that their bodies can do without moving from their place. They could stretch, bend, twist, turn, rise, collapse, swing, shake, sway etc.
- explain and explore and observe in surroundings, body postures and movements of
  - i) the animate like people, plants, animals
  - ii) the inanimate like trains, buses, a tea-pot, a sauce-pan etc.
- observe people at work, identify their pleasing and rhythmical movements like walking, cleaning, sweeping, grinding, thrashing grain etc. and express them in different ways;
- create a dialogue through movements of one or more parts of the body (through facial expressions, gestures, movement of the shoulder, arms etc. It can be turned into a game of 'dumb charade' with children enacting or narrating a story;
- express through body postures or

pure movements (with or without music) emotions like — sadness, anger, helplessness, love, humour etc.)

- explore the various senses through movements or games (like *Aankh-Micholi*), such as seeing and feeling with eyes shut etc.
- learn and participate in folk dances from various states like *Chau* from Orissa, *Gidda* from Punjab, *Garba* from Gujarat etc.
- explore different levels in space—(high, middle and low) such as (i) move as if in higher levels like a bird, an aeroplane, a kite, breeze etc. (ii) move as if on earth like animals, transport etc. (iii) move as if crawling on or burrowing in earth for under water.
- explore directions in space — forward and backwards, sideways, up and down etc. They can try tempo development by moving slowly while changing direction, speed and levels.
- identify and express movements specific to a place and its activities like a railway station, a market place, a temple, a party, a car-workshop, a factory etc. and choreograph these movements with sound effects or music.
- arrange a race in different kinds of walking such as on a given signal/a clap/whistle or a drum-beat,

children walk on their toes or on their heels, then on the inside of their feet and finally on the outside of their feet. These can be tried in different directions.

- the teacher can let each child pick a partner and imagine as if they are standing in front of a mirror. Let one child do a simple action like brushing the teeth or combing the hair—the second child who is the mirror's image, reflects and follows the movement. Then add (i) different sounds to it (ii) abstract movements (iii) various facial expression to it. Switch roles and start the game again
- children can improvise various situations like
  - (i) imagine two friends are meeting after a long time. On a given signal, they greet each other in a happy mood
  - (ii) imagine oneself to be in another country where one can't find the toilet and is looking for one. She/he can try and communicate it to other children.
- Let the children form a wide circle. One by one the children enter the circle to form a big machine, each person being a part of it. Once everyone is part of the working machine increase the speed and finally come to a grinding halt.
- Let the children sit together in a circle. One of them pulls a face at

the child setting next to her/him and then passes the impression around just as in the 'Chinese Whisper Game'. You could add sounds to it. See how fast they can do it and discuss how the impression changed from how it began.

- For creative sounds, let the children try different ways of saying for example, "Give me a knife please". They can make it sound polite, or a threat or musical etc. Using different pauses, different speeds to make the expression varied.
- Within the group let the children try and recreate different environments by creating soundscapes (using only their voices). They can start with something simple like a storm breaking out. Discuss the sounds children can use, the gentle wind building up in sharp gusts and finally into a gale, distant wind growing louder and louder in violent claps, trees falling down and buildings collapsing, breaking of doors and slamming windows, the pitter patter of rain growing into a heavy downpour and then a steady drizzle etc. Then let the children try to improvise the sounds with each child creating specific sounds. Reverse and perform in a regular pattern. Let them try some of the given soundscapes or improvise on their own — early mornings, haunted house, office routine etc.
- Let the children sway with or without music/rhythm; from side to side, from back to front, at a diagonal, in twos holding hands or in a circle holding hands, gently sway with hands held high, palm to palm; and halt still when the music stops or at the call of the teacher.
- One begins with (a) making a sound and continues, (b) the other joins in and continues, (c) another joins in and continues and so on... Soon orchestra is ready. Rhythmic body movements can be added to it.
- Children can discover movements related to various elements like fire, water, wind, earth, sea, tree, clouds, birds, animals. They can devise their own spontaneous movements without being dictated by the teacher.
- Children can present a piece of music through body movements.
- Children can also enact or narrate a story through mime/ body movement. The same can be choreographed into a group activity.
- Children can explore movements with props like scarves, ropes, flags, parachute, symbols etc. They create movement patterns with these and choreograph movement patterns to music.



### **Introduction to narrations and enactments**

- The teacher can ask the children to tell a story by using picture cards by arranging them in sequence; telling the story (without using words) through expressions, movement and music; through use of puppets; finger puppets, stick or rod puppets, or masks; through illustrations drawn or painted.

**Materials required :** (a) Picture cards; (b) simple puppets that can be easily manipulated by this age group; (c) paper and paints.

- The children can (a) tell a story using art objects/real/improvised/constructed (b) make their own animation flip books.
- The child must be motivated and inspired rather than taught to dance. Playing a selection of enchanting music would naturally lead the child to humming, tapping, swaying and moving her/his body; the children can be encouraged to perform folk/regional dances with a simple rhythm and easy spontaneous movements in classrooms. Ideally they can be introduced to the community celebrations linked with seasonal, festive or occasion-specific events.
- Classical dance too can be introduced through exposure to various performances. Artists should be invited to explain, demonstrate and perform for the students. Whenever, expertise is available classical dances must be introduced in classrooms. The children can be encouraged to maintain in scrap books, their observations/impressions of the performances seen, alongwith photographs and information on various well known artists. The teacher must also encourage discussion in class.
- The children can be exposed to the various folk/regional forms of expression/narration or story telling/enactments. These can be discussed, compared and improvised within the classroom. The children can also be asked to record their impressions visually or in writing.
- The performing arts could very easily be integrated with the various subjects of the curricula and thereby channelising theoretical knowledge into practical and creative experience.
- The children can also be exposed to various visual arts through, photographs, slides or books where the vast vocabulary of body postures, styles and portrayal of emotions/experiences are well documented and universally acclaimed.

6



**Teaching-learning with a  
Difference  
*A Multi-level Approach***



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**L**EARNING IS A life-long process. Any situation in life provides opportunities for new learning, relearning of what is already learnt or even unlearning of many things. But the first reaction to the word 'learning' brings the child into our mind. While most of the learning that takes place in the child is self-initiated, a large part of it has to be facilitated through providing the child systematically planned experiences and activities.

In Part I of the document, we have discussed the learning needs of children which differ from child to child as well as how to make teaching-learning child-centred with a view to meet these needs and strengthen the four pillars of learning i.e. learning to know, to do, to live together, to be. In this chapter we will try to elaborate further on what has been described in Part I as a 'multi-level approach' to teaching-learning which can cater to the variations in learning pace and style and discuss how this approach can be implemented in our classrooms.

We will focus on the following questions:

- *What do we mean by multi-level teaching-learning?*
- *What are the different classroom situations, we find in our country, in which this approach needs to be practised?*
- *How can the multi-level approach be implemented in these classrooms?*
- *Can we approach multigrade teaching situations via multi level teaching-learning ?*
- *What does integrated approach to teaching mean and how will its adoption help to handle multilevel groups?*

#### **What do we mean by multi-level teaching-learning?**

*Multi-level teaching-learning means planning and transaction of the curriculum in the classroom in a way that allows for flexibility in pace and style of learning, keeping in mind that children within a class are widely different.*

If we visit a primary grade classroom in a school in our country, we are

likely to find children sitting in rows and the teacher teaching the whole group of children together. Once the teaching is over all the children of that grade are generally assigned the same work/ task based on what has been taught, even though they may be at different levels of understanding of that particular concept/idea. The time allotted for the task is also the same for all the children. *Is this really the child-centred approach which we have advocated in part I of the document?* Not really.

We had mentioned in Part I that each child is differently abled, differently interested and thus learns differently both in terms of her/his pace and learning style. For example, some children are more able and interested in science, some in sports or music while others may prefer mathematics or some art form or different combinations of these. Again, there are children who learn best by working alone and others who are more successful working in groups.

Children also differ in intelligence, readiness levels, interests, learning profiles. Thus to meet each child where she or he is, and foster continual growth, a single, uniform approach of instruction makes little sense. Also, it is these primary years of education that lay the foundation for further learning and hence need to be carefully attended to. Multi-level teaching-learning provides a better

solution for meeting the diversities typical of the primary school years.

Multi-level teaching-learning advocates :

- varied methods of teaching
- varied learning experiences/tasks activities
- varied learning time

To cater to children with :

- varied ability levels (pace of learning)
- varied interests (styles of learning)
- varied age levels
- varied backgrounds

To understand how this approach can be actually implemented in the classroom, it is first necessary to analyse what are the classroom situations like.

**What are the different classroom situations we find in our country in which this approach needs to be practised ?**

The classroom scene in India is as diverse as the country itself. Data about primary schools shows a variety of situations which can be broadly categorized as:

*Monograde teaching situations having:*

- One teacher for one grade with a manageable number of children (may be 40)
- One teacher for one grade with a large sized class (may be 50 and above).

*Multigrade teaching situations having:*

- One teacher for four or five grades
- Two teachers for four or five grades
- Three teachers for four or five grades
- Four teachers for five grades.

All classrooms, whether mono or multigrade, include children with varying interests, maturity levels and needs whose abilities and achievements place them above, at or below their grade level. In other words children are at different learning levels. In a multigrade situation this range is simply wider than that in a mono grade situation. **Therefore, all teachers in all classrooms need to use a multilevel approach to teaching-learning.**

**How can multi-level approach be implemented in these classrooms ?**

Let us consider this in terms of the different components of the teaching-learning process viz.:

- *teaching-learning strategies*
- *teaching-learning materials*
- *assessment*

How does this curriculum framework address these aspects? The proposed curriculum framework has suggested:

- *A Level-wise Approach to allow for individual pace and style of learning (3 levels across five grades)*
- *development of graded Teaching Learning Material TLM (level-wise)*

- *adoption of Child-centred Approach to teaching learning including assessment*

### **Teaching-learning Strategies**

In a multi-level approach to teaching, the learning conditions are planned according to the learners' needs. Maximum scope is provided to ensure that each child proceeds as per her/his own potential. The teacher, on the basis of experience in working with the children of the class, adopts various teaching strategies to cater to the varied learning levels and needs of the children. If we take any grade as a single large group we will find that for each subject area this group can be roughly divided into categories or sub-groups on the basis of ability or interests.

One of the first steps of multi-level teaching would be to identify the children in the class who fall in the different sub-groups. However these sub-groups are again flexible for different tasks/activities as every child is differently abled/intelligent, in different areas. (refer Chapter 2 in Part I of the document). For example, a child good with numbers may not necessarily be good in language, arts or music. In arts again one child may be good in sketching, the other in painting or in sculpture. Learning styles and patterns also differ. Some children learn better when attended to individually, others are more at ease in co-operative

learning situations. Some children absorb better if information is presented melodically (being more music smart), some if presented visually (being more picture smart) while, others love to experiment and explore (being more logic smart).

**Thus it becomes vital for the teacher to cater to the different kinds of intelligence and learning levels that children demonstrate while planning teaching methods, materials and assessment.** These sub-groups of children will need to be flexible in nature to provide for:

- children to work at their own pace
- children to work in many patterns — in pairs, and groups or alone or as a whole class
- tasks/ activities which are intelligence based, readiness based, interest based, to match learning styles or a combination of all.
- requirements of each curricular area

While it may not be possible, nor desirable, to plan according to each child's learning style, providing for a wide variety of activities will enable different children to respond and benefit from the given instruction and experiences according to their own preferences and aptitude. **Multi-level teaching learning, therefore, advocates the use of different strategies to cater to different situations.**

*Whole Grade Teaching* : This is the

most common approach and hence this is resorted to by most of the teachers, most of the time. The lesson is aimed at the average level of ability in the grade. It is easy as the same subject, theme and textbook is followed for all the children uniformly thus ensuring better discipline, monitoring etc. But it is a totally *teacher-centred method* and the lesson is usually presented in the chalk and talk style. No doubt, whole grade teaching is a proven strategy and works well but in combination with other strategies. In certain areas it can still be more effective such as for:

- ⇒ *introducing a new topic / content/ idea/ concept*
- ⇒ *story reading and telling*
- ⇒ *making up stories together*
- ⇒ *physical education*
- ⇒ *music — singing, playing, dancing, art and craft*
- ⇒ *drama, class plays — involving children of different ages, backgrounds, talents*
- ⇒ *excursion/nature walk*
- ⇒ *children's news; talks*
- ⇒ *quiz, discussions*
- ⇒ *problem solving games, language games*
- ⇒ *planning or sharing learning outcomes*

*Individual Teaching-learning* : The teacher here works on a one-to-one basis with each child. This definitely

benefits the child but is not a feasible proposition in large sized classes, whether monograde or multigrade. The teacher assists the child either with work that is assigned to the rest of the class also or special assignment given to suit the child's own needs.

In grades with, appropriate teacher pupil ratio individual teaching can be easily practised. Usually teachers attend to children individually only when they have learning difficulties in language or mathematics and remedial teaching is required. But often even the more abled need individual attention. The teacher must plan to spend time with every child on a one-to-one basis in the class, whenever possible by rotation. Listening to every child read aloud, checking each child's work in the presence of the child, provides for individual interaction between teacher and learner which not only meets the child's academic needs but also the emotional need for recognition and support.

Some tasks require children to work individually such as *practice exercises in mathematics and language, exercises involving observation, classification, estimating, experimenting, interpreting etc. in environmental education, activities involving manual handling of materials, stamina building exercises, creative writing, art activities etc.*

**Small Group Teaching-learning :** Small groups provide opportunity to children to interact with each other and learn

from each other while they work together on a specific task. In other words it provides for cooperative or social learning which, as discussed in Chapter 2 of Part I of this document, is an effective strategy for facilitating children's learning and understanding of concepts, and developing attitudes and values in the context of living together. Small group teaching-learning is also effective for reinforcing any instruction given in a large group and therefore can be used as part of a combination of techniques. Small groups can be formed in various ways:

**Mixed ability group :** Such a group cuts across the range of age and ability. Children with varying skills, maturity levels and experience make such a group a rich learning experience for all. This kind of grouping provides for *peer teaching* (e.g. more able children or older children teaching younger or less able children), *project work* (theme based task across subjects) and other such activities that require drawing upon the strengths of each child in different areas.

**Same ability group :** As we mentioned earlier a class can generally be divided into three ability groups — low, average, high achievers. Keeping the achievement level in mind the teacher can sometimes group children who are able to work together with others at the same level i.e. they share the same task and same learning materials.



Here of course the teacher will have to plan activities for the different groups at their levels. Such grouping again can go across age and grades. Such grouping helps the slow learners and high achievers by providing them opportunities to operate at the speed and level they feel comfortable. However, the teacher should ensure that the task is challenging, yet within the reach of children in the group. The child's maturity level and experience are some of the deciding factors for identifying such groups and

*activities involving problem solving, reading etc.* can be assigned in these situations.

The teacher here can devote extra time to the low ability groups while the other two groups work on their own on planned meaningful tasks which enhance learning.

*Age-based group* : Grouping can also be done on the basis of age of children. Some learning situations may require grouping of children of almost the same chronological age while some

**An Example:**

**Level I ( Grades I and II)**

*Language ability groups on three different activities*

<i>1st Group</i>	<i>2nd Group</i>	<i>3rd Group</i>
<i>Shared reading (T)*</i>	<i>Picture sequencing</i>	<i>Matching words and pictures.</i>

\* T for teacher

**Some Do's and Dont's of Ability Grouping in Teaching-learning:**

- The ability groups should change for different tasks/ activities as each child is differently abled.
- Children should have a chance to sit and work and discuss with as many of their classmates as possible (younger, older, fast learner, slow learners etc).
- Groups should not be given names suggesting failure or success. They can be given names of colours, animals, fruits, flowers. e.g. rose, lily, daisy etc.
- Children progress in different areas at different speed and hence should not be permanently branded as members of a particular ability group.
- The teacher should constantly monitor the child's progress and move her/ him from one group to another from time to time.

others can give better results through mixed age group. For example, for field trips/excursions, projects, peer tutoring, mixed age grouping would help. For certain sports, physical activities, activities for reading, mathematics, same age grouping may be more beneficial.

**Interest group :** Each child has a talent or aptitude and learns best if taught through her/his preferred style. If children, based on their interests, are grouped the teacher can provide tasks accordingly. Here the child's cultural background can play a vital role too. However the teacher should also ensure that all children are exposed to all areas and activities.

A child should never be branded as "music" or "logic smart". To broaden each learner's potential the teacher must provide every experience to every child for her/him to explore and build on all the talents.

**Social/Friendship/Own Choice Groups:** Children who get along very well with each other, if allowed to group together, feel more secure and confident. Compatibility is the main consideration and rules out a competitive attitude. Also children with social/behavioural problems (e.g. disruptive, shy, aggressive children) can be grouped with children who can help them overcome their problems.

While working in groups, children also

learn to tolerate and cooperate with each other and this strengthens the pillar of **learning to live together**.

**Class organization :** A few questions that would arise in the teachers minds, "I am alone with two grades how can I ensure multilevel teaching learning?" or "I have such a large size class" or "I have limited space, limited time, I can only manage direct teaching," and so on. Group teaching, is not an additional burden, it is just a different way of teaching. However to make such teaching more effective and learning meaningful, enjoyable and interesting would require a highly organised classroom and a structured environment. Space, number of children, time, material are just some barriers in the mind and can be overcome by slight reorganisation of the existing classroom. A few guidelines are :

### **Classroom Arrangement**

Classroom layout is very vital to multilevel teaching learning. Sitting arrangement should be **flexible** to allow for mobility and maximum interaction among children as well as teacher and children. With furniture like heavy desks, chairs (that may be fixed also), the space in the classroom gets limited. Infact, to allow for group teaching there should be no furniture at all but just mats for children to sit on. Where there is furniture it should be light so that it can easily be moved

around and rearranged and should be of a shape and size comfortable for the child.

The teacher must be imaginative enough to use spaces outside the classroom too, such as verandahs, halls or even have outdoor classes under a tree. For large sized classes with limited space children can be made to work in pairs or simply turned around to sit facing each other rather than all sitting in a row facing the same direction. There should always be scope for the teacher to move around from group to group to be able to interact with as many children as possible, for as much time as possible.

**Blackboard** : As this is the most widely used teaching learning aid, care should be taken to see that the blackboard is at the height level of the children so that they do not have to stretch their necks to look at it. Besides children can be encouraged to use it for individual/group activities e.g. children can solve problems on the blackboard or do a word building activity involving the whole class etc. Blackboards should be at least two in number on either side of the classroom to involve more children in blackboard exercises and activities. A wall to wall blackboard, at children's height level can be used for various activities too. Portable blackboards that can be easily moved for group work can be very handy.

The teacher's table should be placed

in such a way as gives an unobstructive view of the classroom. However a teacher should not forget the saying, "A teacher on her feet is worth two on the seat".

**Learning Corners** : One would find in any classroom children who have finished their work earlier than the others. What could be a better incentive to keep these children busy than learning corners? Especially in large sized classes or even multigrade classes where the teacher is unable to attend to all the children all the time, such corners assume great significance. However they have to be really attractive, well organised and provide for meaningful learning e.g. a variety of childrens' story books, magazines, games, puzzles, worksheets, cards to encourage creative writing, sheets for colouring, flash cards, colours, work cards, paper, puppets, insects in containers, may be even a pet bird, cardboard, string, wire, tape, twigs, stones, leaves, cans, pieces of cloth, potted plant or any other locally available material which can be used as a learning aid can be part of the learning corner. Materials provided under Operation Blackboard Scheme (OB) should also be a part of these corners so that they are used and not kept permanently locked. Classrooms with limited floor space can have such corners built in wall shelves. These corners can be developed at low cost through locally available material or material made by the teacher and

children. For example children's work can itself be used as resource material. Material can also include data collected through surveys conducted by children. Games, work cards and other material though time consuming to make can be used over and over again provided handled and stored properly. If there is space in the classroom the corner can be made more comfortable with a piece of mat for children to sit on and quietly read, construct, experiment, solve problems, draw, colour, paint or engage in creative writing.

At level I even a **home corner** with toys, dressing up clothes can be placed for children to role-play which is vital for their development and at the same time needs little supervision by the teacher. Be it a multigrade, large sized monograde or large sized multigrade class the teacher in collaboration with children must plan optimum use of materials for self learning activities. Proper planning can help reduce the load of teachers and ensure learning by all children.

**Classroom Routines** : These include the teacher's and student's routine in the classroom life.

**Teacher's own daily routine** : What should it cover ?

A teacher cannot function effectively unless she/he is well organised and prepared for the day. Besides the daily time table, she/he needs a detailed teaching plan indicating :

- the grade level e.g. I, II or III
- subject-theme/activity/task
- the strategy — organising whole grade, small group activities or for individual children etc.
- objectives — knowledge, skills, attitudes, the children are expected to acquire
- aids/material needed e.g. blackboard, worksheets, item(s) from Operation Blackboard (OB) material
- assessment plan/technique — paper pencil, oral, through individual/group activity etc.
- own observations — on the lesson and children as well.

The teaching plan should be prepared in advance as it is like a checklist for the busy teacher and the most important tool for ensuring smooth and efficient functioning in the teaching learning process. Some preparation time after school or in the morning before children arrive is thus essential for the teacher.

The teacher can, before the class begins, complete preparations such as:

set out tasks for the grade/level and various groups within it.

lay out all teaching learning resources for the day e.g. work sheets, teachers book, aids, stationery etc.

A well organised teacher makes her/his students feel confident and good as they can begin work purposefully

and quickly without wasting time. Such a teacher would be able to give time to more children within the school day. The teacher can also move around and check each child's work as such personal monitoring helps develop a better rapport with children and also reduces the workload of the teacher.

**Children's daily routine :** What should it cover?

- Children must know what work they have to do at any point of time. The teacher can tell children through writing on the blackboard or through verbal instructions.
- Children must know how books or other learning material should be distributed, collected and stored.
- Children must know how to behave during school assembly, in the classroom, drawing teacher's attention, tidying workplace, etc.
- Children must know how to utilize their time when the teacher is busy, when they have finished a task or use of the learning corner.
- Children must know how to get their work marked or checked by the teacher or self checking or by a peer etc.
- Children must know their responsibilities — grade monitors, leaders, peer tutors, house captains can be appointed for the grade.

Such duties should be rotated so that all the children get an opportunity. Such assignments can also be used as a reward for good work or good behaviour.

### **Teaching-learning Materials**

Does multi-level teaching-learning mean only use of different teaching-learning strategies or something more than that? No doubt teaching-learning strategies are a very significant key to success both for the teacher and the children in any teaching-learning situation but these need the support of good quality and relevant teaching learning material, which needs to be, of course, based on a carefully conceived and planned curriculum.

A lot of thought goes into the process of curriculum framing keeping in mind its appropriateness to the developmental levels of children, to make it feasible to address the needs of each child. However it is during the classroom transaction that the child's needs are best understood by the teacher. A major task ahead for the teacher is to plan learning experiences/ activities/ tasks which allow for the learning of skills and concepts catering as far as possible to each child's pace and style.

For doing so successfully she/he would need :

- a teacher's handbook giving detailed guidelines for each step of

*teaching including a variety of suggested activities as well as suggestions for assessment,*

- *graded Teaching-learning Materials presented in a variety of forms such as stories, poems, quiz, anecdotes, open ended paragraphs/lessons supported by good, accurate, relevant illustrations*
- *graded workbooks/worksheets for children*
- *well equipped learning corners consisting of concrete material, support material such as library books, pictures, charts, maps, globes, raw material for making teaching aids, raw material for activities in arts etc.*

And thus a variety of :

- *aids and not just the textbook would be the medium of learning e.g. use of audio-visuais, black-board, music, games, art material, software, hardware, concrete objects, multiple texts and reference material, workbooks in the form of graded units.*
- *experiences and situations and not just the chalk and talk method would be used e.g. field trips, excursions, getting visitors to school to talk about their trade or profession, discussion, debates, creative writing, projects, surveys, experiments, drama, physical activities. In other words situations that are*

*multi sensory (stimulate one or more than one sense) and have a multiple intelligence orientation and are designed to create personal meaning would be provided.*

### **Assessing Children's Learning**

Assessment of children's learning is very crucial to ensure that each child is proceeding according to his/her own pace and yet finding a challenge in the learning situation. While continuous assessment will be very necessary, there will also be need to provide for some End of A Module assessment at the end of each graded module which will help the teacher to decide if the child is ready to move on.

The assessment techniques will need to be more of a type of multiple activity based assessment and not just a paper and pencil test at the end of each term or at the end of the academic year. In short, a more creative assessment process would be needed. Keeping in view the fact that children can be intelligent in many different ways, a child should be allowed to express through writing, illustrations, role-play or just orally.

All activities can have a built in component of assessment, formal or informal. Assessment can be conducted also on individual or group tasks, as per the requirement. Some schools have very successfully experimented with self evaluation also with children,

which not only eases the work of the teacher but helps children realise that we can all commit mistakes but we should learn from our mistakes. Identifying and sharing their own mistakes is also likely to develop in children inner controls and can be an important exercise in value development. In some situations assessment by peers can also be attempted.

Multi-level teaching simply ensures that each child is learning in her/his own way - the teacher here is working with children's strengths rather than trying to compensate for their weaknesses. Such teaching will go a long way in motivating children, arousing their interest, building their confidence and preparing them to use their skills beyond the four walls of the classroom. No wonder it is called, "Teaching Learning with a difference."

### **Some Special Measures for Children with Special Needs**

- Provide a barrier free environment
- Arrange preferential seating so that children with special needs receive more individual attention
- Use learning activity centres
- Provide for regular peer tutoring
- Arrange for cross age tutoring
- Use parent volunteers and para professionals

- Provide remedial classes and special teachers
- Match the teaching approach to the specific needs of the child e.g. use more visual aids for the hearing impaired, audio support for the visually handicapped and provide for practice and repeated learning to facilitate recall and recognition in the intellectually slow learners
- Provide a variety of instructional materials such as visual aids, audio inputs, objects, models etc. to promote learning
- Provide for periodic functional assessment for planning Individualized Education Plan (IEP) for children with special needs
- Develop functional/vocational skills in children suited to their developmental needs
- Allot more time to children with special needs to understand concepts, copy from blackboard and completion of assignments
- Allow children to use tape recorders and other technical aids
- Use a multi-sensory approach depending upon the child's specific impairment
- Provide appropriate modifications in the examination/test papers for different kinds of impairment.

### **Can we approach multigrade via multi-level teaching-learning?**

In other words, is multi-level teaching-

### **Has the multi-level approach been adopted/implemented anywhere in the country?**

A few non-governmental organisations like Digantar, Bodh, Rishi Valley among others have been experimenting with the multilevel approach at a micro level in a few schools for the last few years. In Rishi Valley Satellite Schools they have found it to be a particularly useful strategy for a multigrade teacher. However according to them this approach can be more feasible under certain conditions e.g. when:

- pupil-teacher ratio is low i.e. not more than 30-40 children per teacher.
- graded material as well as plenty of self learning material is made available to the teacher including a teacher's handbook giving indications for activities, assessment etc.
- teacher training includes the multilevel teaching learning element with proper teaching practice in the schools for a duration of at least 3 months.
- Continuous on-site support is provided to teachers to help them solve their day-to-day problems.

learning a suitable approach for multigrade schools also? As discussed earlier, multilevel teaching-learning is suitable and useful for all classrooms whether they are monograde or multigrade. However in a multigrade situation it is the way in which the grades are grouped that becomes an important condition for applying the proposed multilevel approach.

Children's grouping in a multigrade teaching situation is a very important element of the teaching-learning process. However, case study experiences and grassroot realities of multigrade schools in rural areas indicate that due to the absence of practical training for handling multigrade classes, availability of only grade specific textbooks, lack of support material and resources and availability of limited instructional hours, teachers in these

schools are attempting to find their own solutions to handle such classes. In practice generally, schools are seen to be following a managerial grouping approach which is based more on administrative rather than academic considerations.

The existing criteria for grouping is :

- number of children per grade e.g. if grades I and II together have a large number of children they would not be combined. Instead grade I and V may be combined because of their numbers, without taking into consideration that both the grades have no linkages by way of content or process of teaching learning.
- number of rooms and their size i.e. space availability is a major consideration for grouping grades.



- number of teachers available e.g. the number of groups (combined grades) depends on the number of teachers available. ⇒ *continuity and follow-up in the students learning as the student would be with the same teacher for a longer duration leading to better understanding between teacher and students*
- age of the children e.g. grade I and V are combined to ensure that older children can tutor as well as discipline the younger lot while the teacher is busy. ⇒ *more homogeneous groups, the age difference being lesser*
- experience of the teacher e.g. higher grades are taken by teachers having more teaching experience whereas the lower grades are usually neglected and not taken seriously. ⇒ *scope for simultaneous teaching of different groups meaningfully.*

### What are the most common multigrade situations?

Multigrade schools with 2 teachers for 5 grades and 3 teachers for 5 grades constitute a wide majority of school situations in the country. Let us consider the first category i.e. the 2 teacher school.

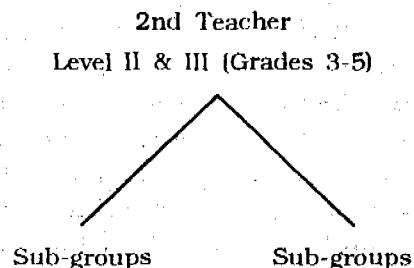
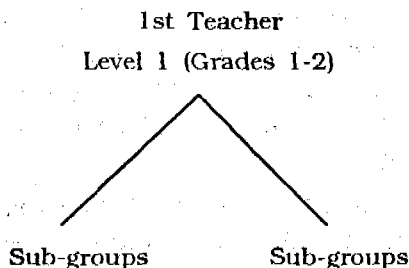
The proposed curricular framework suggests developing the curriculum level-wise for three levels across five grades. In the above situation therefore, we can consider that there are two teachers for three levels and can suggest the following method of grouping:

In short grouping is done to merely "facilitate the teacher to handle the children and not to enable them to learn".

Keeping the multilevel approach in mind it is suggested that grouping of children be done with *learning levels* as the basis and not due to managerial considerations, as this would provide for

⇒ *linkages in the content and processes*

### 2 Teachers for 3 levels



If level-wise material is provided rather than the existing system of grade specific material, the multigrade teacher would find it suitable to teach children by dividing them further into smaller groups rather than giving uniform instruction gradewise.

The above method of distribution is more appropriate from the point of view of children's learning. This is because Level I is the foundation stage for all subsequent learning and hence needs serious attention. This is the stage when children need to be motivated through a developmentally appropriate classroom climate so that they develop interest in further learning. This is also an important stage for preparing children for self learning for the next 2 levels since the basic skills of reading, writing and numbers need to be developed during this stage so that once developed they can equip the children for further learning.

By the time children enter level II they are at stage 2 of development (refer Chapter 2 Part I) with improved physical control, better skills of social interaction and greater capacity for reasoning ability. A strong foundation at Level I will therefore ensure a confident, well motivated and interested child for Level II.

Grouping Levels II and III is again appropriate because :

⇒ there is similarity in these grades in terms of the teaching-learning approach and materials. Children

are more independent at this stage as compared to children at level I. Therefore activities like projects, surveys, creative writing etc. can be introduced more effectively.

⇒ more of self-instructional material can be used at these two levels which will need lesser teacher intervention.

⇒ this will provide greater scope for spiral learning by allowing children within Levels II and III to handle concepts in many ways and revisit these through opportunities to interact with older children also.

⇒ the teacher can resort to small group teaching in the combined levels in many ways such as on the basis of ability, age, interest etc as discussed earlier in this chapter.

⇒ this will allow for continuity with the same teacher for 3 years.

Whenever extra time has to be given to Level III the second teacher can involve Level I and II children for a whole-school activity like a 'bal-mela' or library work, while the other teacher attends to grade V. Time can also be given to Level III after or before school or on Saturdays.

The teacher who has to teach a combination of Levels II and III has to handle a larger group as compared to the teacher who handles Level I. For this larger group the teacher can resort to :

⇒ whole school activities more often e.g. discussion, story telling, whole school projects, excursions, dramatization etc. as it will help to facilitate the two-teacher situation.

⇒ integrated approach to teaching i.e. the single teacher will have to identify within the curriculum themes common to Levels II and III. The teacher here can introduce the theme to the combined levels and thereafter assign tasks as per the ability level of the children in sub-groups.

⇒ peer teaching or 'children teaching children' as it is found to be very effective. Children learn very well from each other and we can see this in the homes when younger siblings learn from older brothers or sisters. Such teaching:

- promotes co-operation rather than competition
- enables the older child to revisit concepts
- develops a sense of responsibility in the children

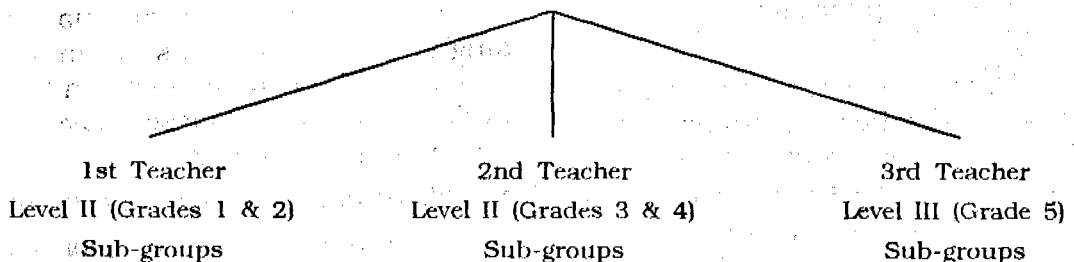
In China such child tutors are called **small assistants**. They are given special training by teachers to prepare them to assist her/him.

⇒ enlisting community help i.e. help from parents or other community members. The community will help only when they are convinced about the effective functioning of the school. They can lend a hand to the teacher in the classroom by assisting her/him in the daily routine wherever and whenever feasible, as also providing resources to the school.

**The second category of multigrade schools could be one in which there are three teachers for five grades.**

This situation is more in conformity with the proposed three levels for the primary years. A primary school having three teachers would be in a position to attend to children level wise as per the proposed curricular framework. The need would be for the graded learning material and appropriate training of the teachers.

### Three teachers for three levels



### **What is the effect of multigrade classrooms on the achievement and attitude of children ?**

The multigrade situation is and will continue to remain a reality in the near future too, the reason being that certain rural and tribal areas are geographically isolated and have habitations with small number of people and school going children. Non-availability of trained teachers (especially in the North Eastern States) is another major factor. Thus it is out of necessity and not choice that this situation will exist. If so, why not look at the positive aspects of a multigrade situation and create the necessary conditions to handle the situation more effectively? Many developed as well as developing countries like Australia, Canada, Norway, Vietnam, Indonesia, China, Columbia, Newzealand have opted for multigrade classes for its advantages.

They believe that a multigrade classroom lends itself to :

- interaction among a wider variety of children (agewise, abilitywise, interestwise, backgroundwise). This leads to a greater sense of belonging, support, security and confidence.
- building a stronger relationship between teacher and students as the student spends more time with the same teacher i.e. for 2 to 3 years.
- better learning by older students as it is enhanced when they are

asked to tutor younger students in their group

- older children in multigrade schools acting as models and guides for the younger children which gives them an increased sense of self-esteem and responsibility
- younger children adjusting to school and routines more quickly by observing and imitating older children
- promoting cooperation and other forms of prosocial behaviour thus reducing pressures of competition
- enriching the learning by children of lower grades as they get exposed to the material designed for the higher grade while students in the higher grades can get opportunities for revisiting concepts and content
- providing for more effective peer learning and collaborative learning and thus save teachers' instruction time.

Though research evidence from developed countries as well as the experience of many organizations shows this to be an organisational alternative to single grade situations it must be noted that there are certain conditions under which such classes have been functioning effectively, viz.

- where pupil teacher ratio is low
- where teacher is trained for multi-level teaching-learning

- where attempts have been made to structure the content of the national curriculum and all associated curriculum materials (e.g. syllabi, teachers guides) in a way that supports multi-level teaching (e.g. integrated subject matter i.e. teaching the same subject at different conceptual levels or a modular curriculum i.e. allowing the student to proceed at her/his own pace through learning modules) and teachers and children have access to it
- where learning conditions are favourable (Refer Chapter 6 Part I)
- where the community is meaningfully involved in the functioning of such a school

Multigrade teaching is a world-wide phenomena, the only difference being that in some countries they have consciously adopted it while in others like ours it is a compulsion. In view of the situations existing in our country and the need to facilitate attainment of ELOs by each child what can be better than adopting an Integrated Approach to teaching-learning for handling multi-level groups ?

### **What does integrated approach to teaching mean ?**

In simple words it means bringing down the boundaries around the subjects at the teacher's level. It also means planning alternative ways of teaching. One possibility could be teaching based on 'themes' cutting

across the "subjects (disciplines)". It is in short "a theme to subject route rather than 'a subject to theme route". This approach would help in providing holistic learning that is more meaningful for a child at the primary stage.

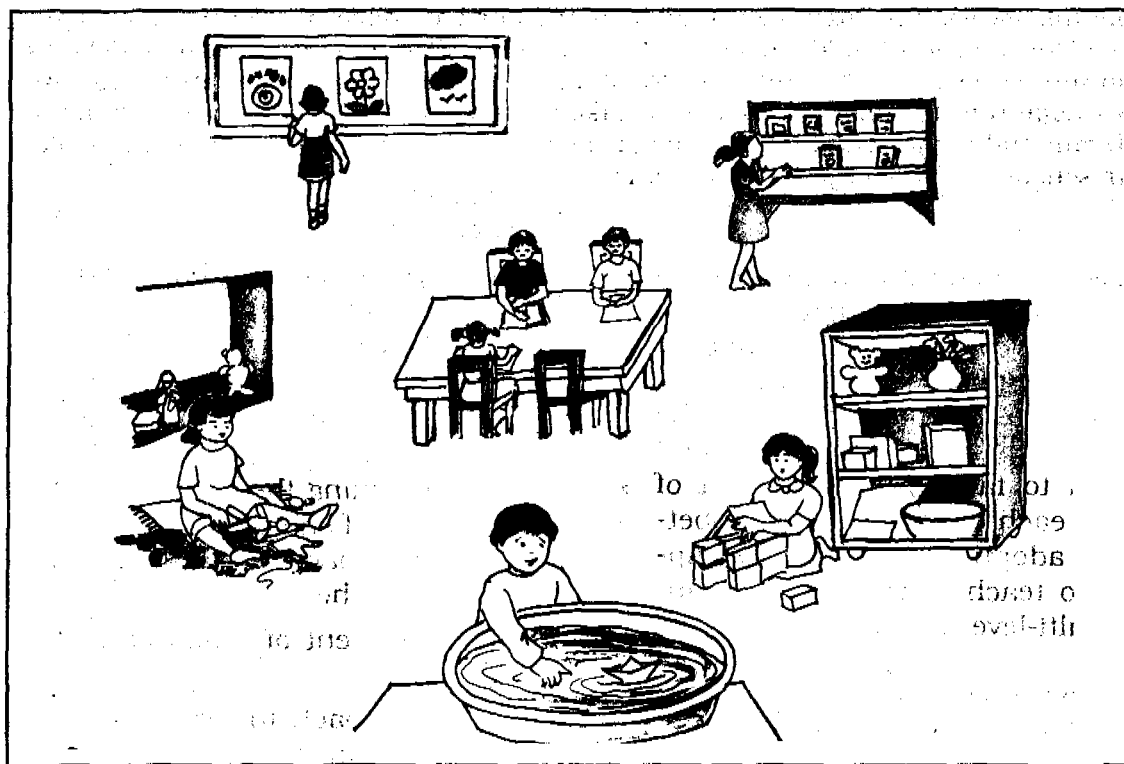
However, adoption of this approach needs:

- ⇒ a very careful planning by the teachers which involves a thorough understanding of what learning by children is expected at the end of a level.
- ⇒ careful identification of the themes across the various curricular areas and detailed planning of techniques/methods to be adopted to transact them.
- ⇒ developing of web charts based on themes can go a long way in helping the teachers plan their activities.
- ⇒ understanding that all ELOs cannot be attained through this approach and thus planning the transaction through a mix of subject based and integrated approach as per the requirements of the situation.
- ⇒ active involvement of children at every stage.

The integral approach to teaching if adopted would help in:

- ⇒ reducing the work load of teachers.
- ⇒ reducing the curricular load of children through removal of repetition in learning the same concepts in different subjects.

- ⇒ encouraging active participation of both the teacher and the children in the teaching learning process items making it more interesting and lasting.
  - ⇒ taking care of the developmental needs of the children whose perception and understanding at this stage is more holistic in nature and not compartmentalised in the form of different subjects.
- implications of this approach and onsite guidance from time to time whenever they face any difficulties. The implications may not only be confined to the inservice teacher orientation programmes but also in the pre-service education programmes of teachers. It would further, require changes in the teaching learning material for teachers as well as children. Above all, the success in adoption of this approach would



Adoption of the integrated approach to teaching may not be very easy for teachers in the beginning. They would need orientation in the implications of this approach and onsite guidance

depend on a large extent on the change in the attitude of all concerned especially the teachers who will have to come out of the cocoon of the traditional methods of teaching.

## **Epilogue**

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**W**E ARE NOW on the last page of this document. But we wonder, can there ever be a last page or a last word in the process of developing curriculum for the education of our children?

Curriculum development, as we are all aware, is a continuously evolving process. There can never be a final curriculum or even THE CURRICULUM since times change, situations change, diversities abound and the demands on the curriculum have to keep pace. And so the process goes on.....

This framework has attempted to address the current concerns and the challenges ahead for the young child. We hope this document will stimulate discussion, debates and introspection in the area of curriculum development for the primary stage. We also hope this will motivate states to take on from here and develop contextually relevant and implementable curricula at their levels which will in turn help to make our schools centres of joy and learning.

## APPENDIX I

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THE document was reviewed by the following experts. Their contribution in the improvement of its quality is thankfully acknowledged.

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## APPENDIX II

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