Including Children With Special Needs

Primary Stage

सर्व शिक्षा अभियान

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INCLUDING CHILDREN WITH SPECIAL NEEDS

Primary Stage

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NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

FOREWORD

For far too long have the schooling systems ignored children with special needs. Now, with the Right to Education Act in place, it has become imperative for most children with special needs to be mainstreamed, and not kept in ghettoes of 'special schools'. This has resulted in the possibility of each teacher being required to facilitate the learning of, say, a mentally challenged child, or a child with hearing impairment, alongside the children they are used to teaching.

However, most teachers in our schools are the least prepared for undertaking this form of inclusion. Many of them have asked their Cluster Resource Centres (CRCs), or State Council of Educational Research and Training (SCERT) faculty, or us at the National Council of Educational Research and Training (NCERT) for support in this aspect.

The NCERT faculty also undertook a research study to find out the range and extent of the challenges teachers face in mainstreaming children with special needs in their classrooms and schools. Based on this study, the faculty's interaction with such children and the experiences of others working towards educating all children together, the Department of Education for Groups with Special Needs, NIE, NCERT has brought out the present document.

Including Children with Special Needs is the first handbook of this kind, aimed at anybody teaching children at the primary level. It gives ideas for supporting, say, a visually impaired child see diagrams. Interestingly such methods help improve the understanding of all children too, a message which should be strongly received from this document.

The NCERT thanks Professor Namita Ranganathan for reviewing so efficiently the handbook, and all the teachers and others who have contributed ideas to be included in it. Any effort in the direction of making our classrooms inclusive can always be improved upon. Constructive comments on this document are welcome, and may be sent to *degsnncert61@ gmail.com*.

PARVIN SINCLAIR
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April 2014   National Council of Educational
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PREFACE

In order to understand how to create inclusive classrooms, especially where children with special needs are present, teachers must develop their knowledge and skills, and an understanding of key strategies critical to achieving success. The Department of Education of Groups with Special Needs (DEGSN), NCERT, developed this handbook to provide exemplary guidelines for meeting the special needs of children in an inclusive classroom. Successful inclusion practices highlight the significance of not only the presence of children in the class but also the quality of their experiences and their achievement across the curriculum. This handbook emphasises the need to shift from the idea of children with special needs fitting into the existing classrooms, to classrooms accommodating the needs of all learners, including learners with special needs.

The idea for developing this exemplary material was initiated by the Department of School Education and Literacy, Ministry of Human Resource Development (MHRD), based on the demands raised by teachers in inclusive schools under the *Sarv Shiksha Abhiyan* (SSA) Scheme.

The first phase of the development process involved individual interactions with teachers and parents in different States and understanding the challenges faced. Consistently, teachers reported the need for more training in accommodating and adapting the curriculum, and teaching and assessment techniques to meet the needs of Children with Special Needs (CWSN). Many teachers felt inclusion of CWSN was an additional burden and these children should be taught in separate schools.

The second phase involved workshops with experts including teachers. These were conducted across different regions of the country. The objective of these workshops was to gain understanding of successful practices of implementation of inclusive pedagogy, and develop exemplars for curriculum adaptation, teaching strategies and assessment. The last phase of the project involved gathering feedback on the draft handbook from the grassroots. The handbook is the result of interactions with experts in the field combined with research.

Looking at the current scenario of inclusive education in the country, we tried to do away with labels as far as possible, not only because these

labels can cause children to be singled out and ridiculed, but also because labels lower the expectations of teachers and parents from the child. Labels also prompt children to consider themselves incomplete or inadequate, resulting in low self esteem. Also, we exercised a lot of caution while conceptualising various strategies and discouraged the idea of segregated classroom practices for CWSN. This is because, in many places, in the name of inclusion, these children are still being taken out of the classrooms for teaching. We have tried to present strategies that would benefit all children and make classrooms vibrant learning places for all. In the book we have clearly endorsed the rights of CWSN to learn and to be respected as individuals.

This handbook is the result of numerous interactions with the stakeholders and depicts realistic examples from the grassroots. It can be used by teachers on their own without any difficulty in understanding the strategies mentioned. We would also like to mention here that no single book can cover the special needs of all children, considering the heterogeneity of conditions involved. Two children having the same degree of disability may function at different levels and may require different interventions. This book is therefore not setting standards nor is it prescriptive. It presents enough scope for teachers to reflect and innovate.

ACKNOWLEDGMENTS

CONTENTS

Do You Know ?

According to the 86th Constitutional Amendment Act, 2002, free and compulsory education for all children in 6-14 year age group is now a Fundamental Right under Article 21-A of the Constitution.

EDUCATION IS NEITHER A PRIVILEGE NOR FAVOUR BUT A BASIC HUMAN RIGHT TO WHICH ALL GIRLS AND WOMEN ARE ENTITLED

Give Girls Their Chance !

1. INTRODUCTION

Why Inclusion?

Inclusive education means education of all students, where all students are equal participants in the learning process. Provision of inclusive education involving students with disabilities is based on the belief that those with disabilities SHOULD NOT HAVE TO DEPEND on specialised services alone, to benefit from educational resources, activities and practices that are otherwise available to all. Inclusivity is maintained when all members of a group are able to participate in its activities, which means, provisions made are considerate of ALL MEMBERS and not just those from specific groups or, with special abilities, disabilities, and/or needs.

As members of a group or a community, all have EQUAL RIGHTS TO PARTICIPATE; the practices and services must thus be inclusive of all. This right is also upheld by the Indian Constitution, which assures all Indians the right of Equality of Status and Opportunity. Thus, while it is the responsibility of the society and community to involve and treat all its members as equals, the INDIAN CONSTITUTION also guarantees provision of equal access to opportunities.

The Right to Education (RTE) Act (2009), which makes elementary education a FUNDAMENTAL RIGHT OF *EVERY* CHILD, is of great significance to the government as well as private schools. Our schools and classrooms need to reflect this social, constitutional and legal right of every child to be included in the educational processes and practices – our classrooms, now more so than before, need to be ready to include students from different backgrounds, with differing needs and abilities.

The classroom offers a dynamic, productive space where ideas, values, information, knowledge are shared and conveyed. Organisation of the class and interactions amongst its fundamental components i.e., the students, teacher and curriculum-transactions, create potential for the group to move from a state of *not knowing* to one of *knowing*. With the recognition of education's impact on development, education and its aspects are now under sharp focus. There are several indicators[1] pointing out that our schools need significant improvements to develop the quality and effective

> *Inclusive education means education of all students, where all students are equal participants in the learning process...... This right is upheld by the Indian Constitution...*

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[1] *NCERT National Achievement Survey: Class V, 2012 and National Achievement Survey: Class III, 2013.* Although enrollments have increased over the years, rates of basic and expected literacy remain poor (Global Monitoring report, 2013).

> *...our classrooms, now more so than before, need to be ready to include students from different backgrounds, with differing needs and abilities*

reach of education to children attending the nation's extensive schooling system[2].

In recent years, these increasing concerns have brought significant attention from educators, policy-makers, researchers and economists, to schools and classrooms in India. Constitutional provisions and legal mandates such as the RTE, Persons With Disability (PWD) Act[3] are policy measures to make improvements in India's education system, accessed by over 125,059,229 students (DISE 2013) including 25.96 lakh CWSN enrolled in schools, 0.52 lakh enrolled in EGS/AIE centers and another 1.38 lakh provided support through home-based education (Progress of Inclusive Education in SSA in 2009-10, MHRD). Educational initiatives introduced to classrooms such as Continuous and Comprehensive Evaluation, inclusive education and evaluative interventions such as NCERT learning indicators are also amongst the initiatives taken to improve teaching-learning in our classrooms. In light of the introduction of these educational innovations, the attention drawn and the urgency to make classrooms better call for revisiting and revising practices, including (1) planning, (2) methods of instruction and (3) assessments, that the classrooms have been following so far.

Developing new insights into accustomed practices may seem demanding on time and energy, at times even seeming difficult to put into practice. It would help to look upon these as opportunities to advance teaching, perhaps better the teaching-learning experiences in the classrooms. *The purpose of this handbook is to help make the transition to the expected changes easier for teachers.* It presents suggestions, tips, ideas and strategies towards helping the teacher make classrooms and instructions *inclusive*. These are gathered from RESEARCH, from EXPERIENCES, and information collected after a series of workshops organised by the Department of Education of Groups with Special Needs (DEGSN), with regular and special education teachers. As mentioned earlier, by inclusive is meant including all children

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[2] *The country's 10,86,720 Government schools with 4520617 teachers are accessed by 125,059,229 students (DISE 2013)*

[3] *The Persons with Disabilities Act, 1995 advocates education of children with disabilities in appropriate environment till they attain the age of 18 years. Sarva Shiksha Abhiyan, the national educational initiative to help realise the Universal Elementary Education policy, describes the educational placement of CWSN and states that "as far as possible, every CWSN should be placed in regular schools, with needed support services" (National Information Center, 2007, p. 1.9.3c).*

in the classrooms[4]. Thus, while the handbook will address including classroom students from the perspective of a CWSN, it is developed to make classrooms inclusive for all students in the classroom.

In the following sections, first an overview of terms and definitions associated with special and inclusive education is presented. This is followed by an explanation of the organisation and contents of the handbook.

Understanding Terms, Terminology and Phrases

Several terms and phrases related to disabilities and special needs create some amount of confusion, perhaps misunderstanding. This section clarifies some terms that you are likely to come across in your work of creating inclusive classrooms.

■ *Impairment and Disability*

Two terms related to special and inclusive education that are most commonly used, often interchangeably, are impairment and disability. While impairment refers to a lesser degree of complexity in the way our bodies work, disability refers to inability or not being able to perform a task. Most of us have felt inability at some time or other in our lives: during illness, following a physical injury or, when in an unfamiliar environment. For example, during illness, you may feel disabled from doing your regular work with usual rigour, energy and ability; during a physical injury like a fracture, or a severe sprain, disability would involve not being able to use your limbs effectively, such as to walk, run or write. Given that often these and related terms are used interchangeably, the following presentation offers explanations of pairs of terms we often hear involving persons with disabilities.

Impairment: (*Dosh, Vikaar*) Illness, injury, complexity arising from any difficulty in the way our body works.

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[4] *In addition to semi-formal interviews, information was collected through three workshops on: (i) Need Assessment held in July 2013 at the NCERT campus, New Delhi. Its participants included regular school teachers from public schools and resource teachers (ii) Second workshop was held in September 2013 in Bangalore inviting practicing teachers and administrators from different disability areas, and special education teachers and educators working in special as well as inclusive settings. (iii) The third workshop was held in October 2013 at the NCERT campus in Delhi. Participants included special teachers working in public as well as private schools, regular school teachers from public schools, and representatives from the Department of Elementary Education (DEE), NCERT.*

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…two children with same disabilities may have different needs; for example two students with vision or hearing impairment will need different approaches to teaching and learning, as their vision and hearing abilities will be different depending on the degree of impairment. Thus, while one student with visual impairment (VI) may be able to read and follow instructions from a blackboard, another student, also with a VI, may not be.

Disability: (*Nishkta*) Disability is more than a problem or difficulty with how our body works - a child with an impairment may experience disability when functioning in an environment that impacts the child's successful performance at a task.

Thus, impairment alone may not cause inability to perform in a manner equal to others, but the systems within which one has to live, learn, work and operate can cause a child with impairment to be unable to perform successfully (for example, a child with hearing impairment maybe able to successfully function within own immediate contexts of family and neighbourhood, and not experience any 'disability' in going through routine, day-to-day interactions, but may experience inability to perform with the same success as her regular classmates in a classroom setting involving expected expressions of learning). Overcoming or successfully being able to navigate, participate, function and contribute in a school, classroom or any organised system thus, needs suitable interventions for a person with impairment/s. The interventions need to be effective in reducing or eliminating challenges and barriers.

… a student with impairment may have developed some skills from previous exposure or experiences. For instance, before coming to your class the child may have had exposure to special or even general education settings. On the other hand, a student with impairment, new to your classroom and without previous educational experiences will have different needs and therefore require different approaches than the ones who have developed some skills before joining the classroom.

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> *…. we hear the term "normal" being used in reference to typically learning students particularly in discussions involving students with impairments/disabilities. Using the word "normal" implies a negative connotation for those with specific learning needs and it is important to bear in mind that even among those developing typically, there are variations in development and learning patterns. This is especially important to consider for our context, which has multiple diversities – that given the richness in our diversities it would be inappropriate to have a typical child or standard on which we can measure normalcy.*

Assessment

(*Aankalan*) This involves gathering information to understand the student-teacher-performance and/or classroom functioning and is thus an interactive process. Assessments are formative and diagnostic in nature that is, they provide information about students' areas of strength and help recognise the teaching-learning aspects that require attention or improvement.

Integration

(*Ekikaran*) Referring to the education of students with disabilities, integration means providing education to students with special needs in regular classroom. In integrating a child with disabilities in the regular classroom, focus is on having the child adapt/adjust to the regular classroom or fail. The child may be even taught in separate classrooms.

Evaluation

(*Mulyankan*) This involves making a value judgment on a performance since they are graded or scored. They are summative in nature .and are considered as actual measure of level of quality at the time of evaluation.

Inclusion

(*Samavesh*) Inclusive education refers to education of all students, where all the students are equal participants in the learning process.

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■ *Adaptation*

(*Anukulan*) Adaptation refers to adjusting assessments, material, curriculum, or classroom environment to accommodate a student's needs so he / she can participate in, and achieve the teaching-learning goals. Some examples include:

�’ use of audio tapes, electronic texts where available, having peer/ classmate to assist with class activities, or simply re-organising seating of a child who may be unable to be attentive, easily distracted, or distracting others in the classroom;
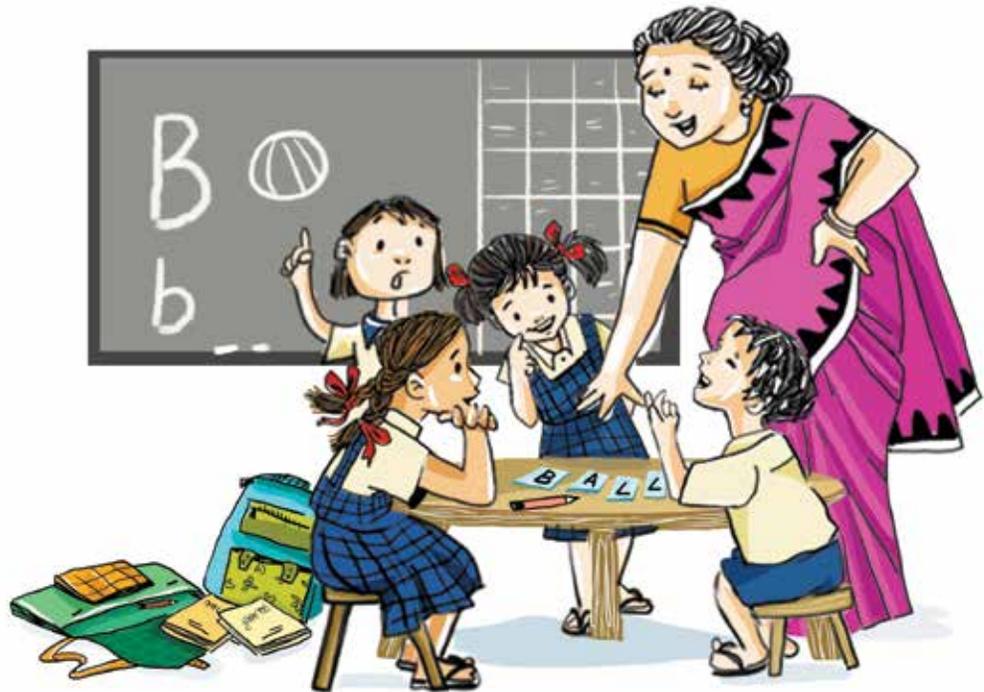
�’ alternatives to written assignments to demonstrate knowledge and understanding (e.g. through oral presentations, drawing or other artistic presentations);

�’ extended time to complete assignments or tests;

�’ computer software which provides text to speech/speech to text capabilities, when available;

�’ provide for multiple experiences with materials to allow for different learning styles or needs, also to help reinforce learning (for example, learning how plants grow in multiple ways – through class textbooks, through hands-on experience by growing one in the class, preparing
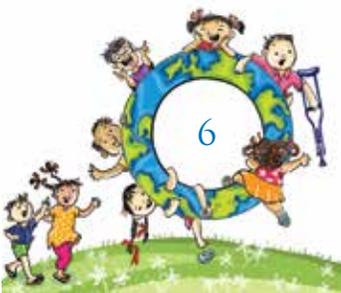
observation record of its growth, and through group or whole class discussion about the on-going learning).

■ *Modifications*

(*Sudhaar*) Modifications involve making changes to learning goals, teaching processes, assignments and/or assessments to accommodate a student's learning needs. E.g., (sample lessons on pg. 29-43). For example:

◘ changing the assignment to accommodate a student's learning needs: allowing use of letter-cards to spell words as a modification to saying the spelling aloud, allow the student with intellectual impairment to utilise concrete and/or more hands-on experiences, changing the conceptual difficulty level for some students.

■ *Curriculum*

While we begin to comprehend and incorporate some of the understandings needed to include a student with impairments in the classroom, it is important to realise the significance of the curriculum to classroom practices. Creating an inclusive culture in classroom will involve attending to the curriculum, which includes the components of a course of study. These consist of the syllabus, textbooks and needed teaching learning materials, teaching strategies/processes and assessment and evaluation processes. In discussing the efforts in curricular development and reform, the *National Curriculum Framework* (NCF) 2005 underscores the significance of making curriculum "an inclusive and meaningful experience for children" stating "this requires a fundamental change in how we think of learners and the process of learning" (p. 13).

Attending to curriculum to define the classroom culture and the approach to the teaching-learning processes is thus a significant aspect of fostering inclusivity in the work with students.

The above section offers understanding of frequently used terms in working with students with special needs and in inclusive classrooms. The following section explains how the handbook and its contents are organised, with explanations of the approach adopted in presenting the tips, strategies and suggestions for an inclusive classroom.

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Structure of the Handbook

As expressed earlier, every child has a right to education. Our classrooms need to be ready to include children with diverse learning needs to ensure compliance with the most recent legal mandates. Many of our classrooms have been working with students with disabilities in regular settings; however, these have often been with significant interventions from non-governmental organisations. The implementation of RTE requires that every classroom be ready to include a CWSN in its teaching learning processes, assessment and evaluation procedures and extra-curricular activities. This handbook has been prepared with these expectations in mind. Following is an explanation of how its contents are organised.

The handbook is organised in two main sections. The first section offers suggestions, tips and strategies for inclusive classrooms which have students with specific needs related to sensory disabilities, physical disabilities and cognitive/intellectual disabilities. The next section presents an understanding about CCE and offers a few suggestions on how it could be utilised for an inclusive classroom.

The following paragraphs present a brief overview of categories of special needs as addressed in various sections of this handbook.

■ *Sensory Disabilities*

Sensory disabilities arise when a child is unable to successfully perform due to impairment to the senses. Sense organs include organs of taste,

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smell, sensations of heat, cold, touch, pain, pressure, sight, hearing. Various sense organs receive information from the environment and, along with the brain, are a part of our Central Nervous System, a highly organised and complex system of our bodies (Gray 1918, p. 721). Among the senses, impairments to the senses of sight and hearing, i.e. visual impairment and hearing impairment have considerable implications for teaching-learning in the classroom; we rely significantly on both these senses – of hearing and sight – for our learning.

The handbook offers suggestions and guidelines related to vision and hearing impairments. Information includes (1) understanding the general nature of impairments, (2) appropriate approaches, considerations and (3) some suggestions for creating an inclusive classroom for typically learning children and children with visual or hearing impairments[5].

■ *Physical Disabilities*

Physical disabilities arise when a child is unable to participate due to impairment of the physical organs affecting mobility, movement, and/ or dexterity. The Draft Rights of Persons with Disabilities Bill, 2012, in clarifying the benchmark disabilities locates cerebral palsy as a condition related to physical disability (p. 4). This section presents some tips, suggestions and ideas for inclusive classrooms with considerations to student with orthopedic or physical disability[6].

■ *Cognitive, Intellectual Disabilities*

The way a child learns is impacted and, also influenced, by how different sense organs, parts of our bodies and the brain, are co-ordinating or how they are affected. Since specific disabilities, such as Autism Spectrum, intellectual impairments and learning difficulties are primarily associated with the working of the brain and/or how brain processes the information received, these are addressed under cognitive and intellectual disabilities.

The conditions that affect learning due to the brain's functioning have been under research as well as educational studies for a long time. In the section- The Nature of Cognitive, Intellectual Disabilities – we present strategies that

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[5] *Students with deaf-blindness and those with cerebral palsy experience multiple disabilities: suggestions for including students who are deaf-blind and are experiencing disabilities are provided at the end of each of the sub-sections of Sensory Disabilities.*

[6] *Tips and suggestions to promote inclusive classroom with a student with cerebral palsy are provided in the section on physical disabilities.*

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can help in enhancing teaching practices to make classroom approaches inclusive of different learning needs that arise due to developmental delays, brain's functioning and/or capacities.

Given the increasing use and, at times misuse, of many of these terms, a little clarification and some overview of cognitive and intellectual disabilities would be helpful for our work in the inclusive classrooms. The following paragraphs present a brief understanding about these conditions and disabilities. To facilitate the understanding of the information presented in the handbook and to help advance your own learning, we also explain how the handbook uses the terms cognitive and intellectual disabilities.

Our Brain and its Mysteries

A deeper understanding and knowledge about how our brain works is still evolving. Time and again we read about studies revealing new information on how our brain receives and organises information. As our understanding of the human brain advances, various disability conditions that are due to the brain's functioning are also receiving the attention of scholars, researchers and teachers. Among the conditions that are due to the manner in which brain works and that have direct implications for teaching-learning, specific learning disabilities (SLD) and Autism have received significant attention in recent times. Of these, we hear the term SLD being used in our schools very often. It is important that we have a clearer understanding of what these mean because that has direct implications for our work with the students in the classrooms[7]. We must understand that a child's evaluation and assessment need to meet certain expected criteria to be identified as experiencing these conditions and to receive related and required educational interventions and services.

Difficulties and disorders such as SLD, Autism, (and also retardations in learning) require detailed examinations, tests and diagnosis, which may not be available or accessible to the children and families that attend our schools for their learning and education[8]. It is therefore important to be CAREFUL BEFORE LABELING A CHILD with a disability. Mislabeling or identifying incorrectly would result in a CHILD'S NEEDS not being understood. In many of our settings not being able to understand how the child makes sense

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[7] *See also National Curricular Framework (2005) Chapter 2 Learning and Knowledge, p.16 for related discussion.*

[8] *The SSA offers an overview of assessment guidelines in identifying children with special needs. It is important also to determine their relevance to the context of the child.*

of the world and learns, often results in the student being discriminated against. These misunderstandings can prevent the students in our schools from getting the educational interventions that would otherwise help them to begin learning in the classrooms.

Disabilities that teachers often talk about today such as SLD, Autism are therefore all the more challenging to understand in our context, first, because they require adequate research based and field tested evaluations by trained professionals, second and more important, these evaluation procedures need to be relevant to, and address diverse contexts, and third, because a more definitive understanding about these conditions and how the brain functions continues to evolve even in contexts where research and understanding about these conditions are comparatively more advanced.

The following paragraphs present basic information about specific cognitive and intellectual impairments.

Autism:

Alternative terms: Autism Spectrum Disorders (ASD). ASD is a developmental disorder. It refers to a range of serious developmental, neurological problems. Autistic disorder, autism or classical ASD, is the most severe form of ASD. It appears in early ages, usually before a child reaches 3 years of age and affects the regular development of social and communications skills.

The Draft Rights of Persons with Disabilities Bill, 2012, defines "Autism Spectrum Disorder" as a "neuro-psychological condition typically appearing in the first three years of life that significantly affects a person's ability to communicate, understand relationships and relate to others, and is frequently associated with unusual or stereotypical rituals or behaviours" (p. 84).

Needs vary from child to child but all disorders in Autism spectrum severely affect a child's ability to communicate and interact with others. They exhibit social impairments, communication difficulties, and repetitive, stereotyped patterns of behaviour. Studies and investigations to better understand this developmental problem continue. To date there is no known cure but certain interventions can help a child adapt and therefore make a difference in their living and learning experiences.

Specific Learning Disability:

It is a general term used to describe specific kinds of learning problems. A learning disability affects ability to learn and use certain skills. The skills

> *Autism Spectrum Disorder: a neuro-psychological condition typically appearing in the first three years of life that significantly affects a person's ability to communicate, understand relationships and relate to others, and is frequently associated with unusual or stereotypical rituals or behaviours.*

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typically affected are reading, writing, listening, speaking, reasoning, directing attention, doing mathematical calculations and coordinating movements. Dyslexia or difficulties experienced in reading, Dyscalculia or difficulties with mathematics, and Dysgraphia or difficulties with writing are also used when addressing disabilities that affect specific aspects of learning.

It is especially important to know that a child with a learning disability is NOT LAZY or DULL but that she or he is not able to learn because of the way her/his brain is recording and analysing information. It is therefore important to first rule out any environmental issues that may be impacting the student's learning such as too many distractions, poor visibility, other health issues, fatigue, nutrition deficiencies etc.

As with autism, determining a child as having SLD also needs detailed and specific assessments and evaluation to understand the nature and severity of the disability. A child with SLD will experience the world in a different way compared to another child with SLD, and will thus have different types of learning problems and needs. One child with SLD may therefore experience difficulties in writing, and another child may experience difficulty only in mathematics.

Intellectual Disabilities:

The term refers to lowered capacity or ability of the brain, thus far commonly referred to as mental retardation. There has been a shift away from using the term *retardation*. In a poll conducted in 2003, term "retard" was voted to be the most offensive word (Rose, 2004). In keeping with the shift towards using a more positive terminology, this document also uses the term *intellectual disabilities* in discussing classroom impediments to learning experienced due to lowered capacity and/or ability of the brain's functioning.

Intellectual disabilities that affect learning and overall development are experienced when mental functioning of the brain is affected such that the child shows limitations in daily living skills such as communicating, taking care of self and social skills. These limitations will cause a child to learn and develop more slowly than a typically developing child and catch up at a slower rate on many skills that their regular same-age peers have attained, for example, dressing self, speaking, walking etc. They do catch up or learn, but it takes them longer than the regular, typically growing and developing child (hence the previously widely used term retardation

> *It is therefore important to first rule out any environmental issues that may be impacting the student's learning such as too many distractions, poor visibility, other health issues, fatigue, nutrition deficiencies etc.*

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meaning slowness. Due to negative connotations attached to this term it is not used as widely as before).

Tests and Assessments:

To measure and identify the degree of intellectual functioning, typically two measures are used: tests to measure a child's intelligence quotient or IQ test and Adaptive measures.

Intelligence Tests: As addressed earlier, it is important that tests used to measure your students' IQ are "standardised" on Indian contexts, that is, they are developed for and attend to, the Indian developmental, socio-cultural contexts.

Adaptive Scale: The adaptive scale measures adaptive skills to understand the degree or level of ability to adapt to one's environment, using day-to-day skills such communicating, social interactions, and self-care.

As relevant to the purpose of this document, related information is organised under the section Cognitive/intellectual Impairments. Given the limited accessibility or availability of tests and assessments, many of the students experiencing learning difficulties that are either due to cognitive or intellectual impairments may not get identified and diagnosed appropriately. Further, many children have different learning styles, or face demanding conditions outside of school such as poverty, illiteracy of parents, lack of adequate or appropriate care, taking care of younger siblings, household chores, labor or even abuse. These also impact their ability to stay attentive, focused, and/or learn. Given the complexities surrounding the issue, this section offers some strategies to design your classroom, instructions and activities that are inclusive to different learning styles and needs.

Your classroom will reflect the spirit of inclusivity when your students witness your efforts to be inclusive of all and begin internalising it themselves. This is demonstrated in your approach to the students, your child-friendly, disabilities-friendly and inclusive language, teaching practices and classroom organisation. When all the students feel included, it will reflect in their own approach to each other, making your work at creating inclusivity easier. Hopefully, this handbook will help you towards creating such a classroom, where all in the classroom feel that they are equal participants to what you, the teacher, have to teach them.

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Notes:

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2. The Nature of Visual Impairment

Visual impairment (VI) refers to the condition arising due to significant loss of vision. VI includes children who have major vision loss even if they use corrective glasses. The nature and degree of visual impairment will vary from child to child; so, to learn effectively, each student with VI may require specific adaptations to teaching learning practices and materials, depending on the type and degree of vision loss.

Definitions of Vision Impairment, Low Vision, Blindness:

According to the International Classification of Diseases (ICD) (2006), "Low vision, taken together with blindness, represents all visual impairment". That is, the term visual impairment includes moderate low vision, severe low vision and blindness. While discussing vision impairment, VISUAL ACUITY and/or FIELD OF VISION are considered.
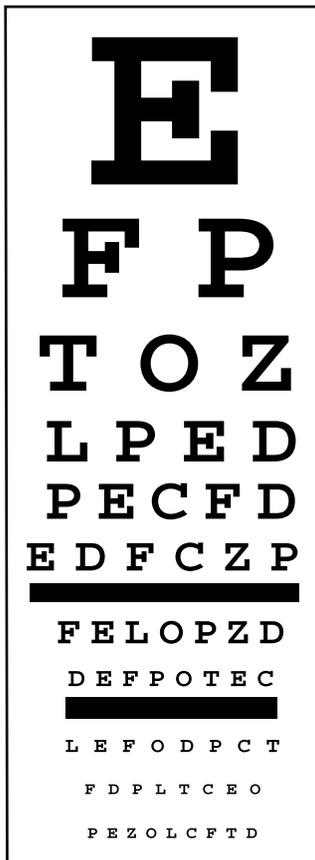
In simple terms, visual acuity indicates how clearly a person can view an object from a fixed distance. This is generally measured using SNELLEN CHART. The standard visual acuity of a person is 20 /20 (expressed in feet) or 6/6 (in meters). Field of vision is the area that is visible to the eye when looking at a fixed point. It is measured in degrees (Pal & Pal, 2005). BLINDNESS ranges from being totally without sight to unreliable vision and primary reliance on other senses. Legally defined (The Draft Rights of Persons with Disabilities Bill, 2012), blindness ranges from a visual acuity of 20/200 in the better eye after correction, to having no usable vision or a field of vision reduced to an angle of 20 degrees or worse.Visual acuity of 20/200 means that the person can see an object that is normally seen at 200 feet only at a distance of 20 feet. A reduced field of vision means that the individual has TUNNEL VISION with limited peripheral vision.

A SNELLEN CHART

Low-vision refers to a condition where a person has any of the following conditions:

a) Visual acuity not exceeding 6/18 or 20/60 and less than 6/60 or 20/200 (Snellen) in the better eye with correcting lenses; or

b) Limitation of the field of vision subtending an angle of more than 10 degrees and up to 40 degrees.(The Draft Rights of Persons with Disabilities Bill, 2012).

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MOST STUDENTS WITH VISUAL IMPAIRMENTS HAVE LOW VISION. Students with low vision should be encouraged to use their residual (remaining) vision, using the necessary optical aids and adaptations like large font sizes, magnifiers etc. when appropriate. Students who are described as blind may have some usable vision. A person with blindness usually uses Braille as the reading and writing medium.

Normal View

View by a Low Vision Person

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View of a Normal Sight Person using Spectacles

View of a Low Vision Person using Spectacles

18
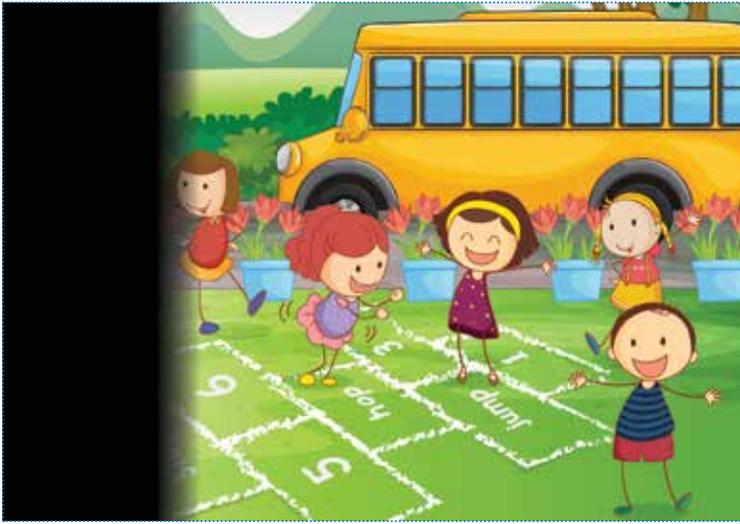
Marginal Field Defect

Peripheral Field Defect

Central Field Defect

Students with low vision should be encouraged to use their residual (remaining) vision, using the necessary optical aids and adaptations like large font sizes, magnifiers etc.when appropriate. Students who are described as blind may have some usable vision. A person with blindness usually uses Braille as the reading and writing medium.

19
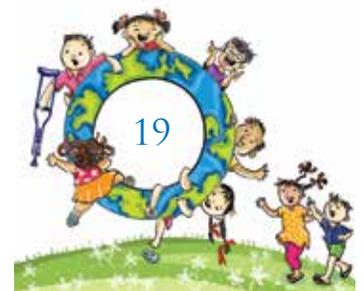
We may further classify visual impairments as congenital or adventitious.

Congenital VI refers to the condition when loss of vision is present at birth.

Adventitious VI refers to loss of vision occurring after birth, which could be a result of illness or accident. The age and level of development of the student before the onset of visual impairment influences her / his ability to learn new skills and concepts. Thus, students with congenital blindness may have difficulty in acquiring concepts, while students with adventitious blindness may be able to benefit from the earlier vision and the exposure they would had to visual experiences.

It is important to bear in mind that although two students may medically have the same diagnosis and visual acuity, each may learn and function in different ways.

Eye Report

The student's eye report, if available, provides essential information in understanding the diagnosis, acuities, prognosis and other considerations. This report should be seen by a teacher when a student enters school and must be updated as needed. The student's eyes must be regularly checked by a doctor and teachers must interact with the doctor regularly for support in understanding the condition while taking decisions regarding the child's education.

You may have a student in your class with vision impairment who may not have, yet, been identified as being visually impaired. Following are some of the signals to look out for to help the child get the needed services if necessary.

Signs of Eye Trouble In Children

■ *Physical Symptoms:*

◘ Eyes that are red-rimmed, crusty-looking or swollen for more than a few days;

◘ Inflamed eyes or eyes watering too often;

◘ Recurring styes;

◘ Eyes that are misaligned (look crossed, turn out, or don't focus together);

◘ White or greyish-white color in the pupil;

20
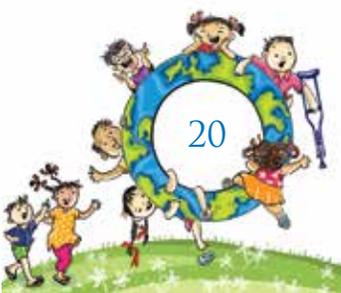
◘ Eyes that flutter quickly from side to side, or up and down;

◘ Bulging eye(s);

◘ Drooping eyelid/s;

◘ Eyes that are always sensitive to light;

◘ Squinting, rubbing or closing one eye;

◘ One or both eyes turn in or out;

◘ Any change in the eyes from how they usually look.

■ *Child behaviours[9] :*

◘ Child often complains of eye pain, itchiness, or discomfort;

◘ Constantly reading close to the face;

◘ Attempts to brush away a blur;

◘ Excessive rubbing of eyes;

◘ Constant frowning;

◘ Shutting or covering one eye for visual tasks;

◘ Head-tilt or head-turn when looking at something;

◘ Leaning forward to see better;

◘ Excessive blinking;

◘ Undue sensitivity to light;

◘ Excessive irritability during close work;

◘ Stumbling or tripping over objects;

◘ Clumsiness in reaching;

◘ Difficulty in reading letters on the blackboard;

◘ Using finger as a line marker while reading.

Source: Bishop, 1996, American Academy of Pediatrics, 2011, Eye-Q India, 2011, Julka,A. , 1999.

21

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[9] *These behaviours assume that there are no other problems such as motor difficulties.*

Need specific Approaches

◘ Learning through non visual modes:

Touch: Use real, concrete materials.

Listening: Include greater use of detailed and descriptive instructions.

Smell and Taste: Use smell and taste associated with real, concrete materials.

Need specific Considerations

◘ Use existing visual skills where/when you can/seating closer to the blackboard.

Lesser use of reflective surfaces.

Appropriate lighting.

Use of contrast colors.

◘ Use specialised material available (Braille, Taylor frame, Maths kit).

◘ Use Orientation and Mobility instructions.

SUGGESTIONS FOR INCLUSION OF A VI CHILD

◘ Reserve a seat in the front row of the classroom (or, closer to the teacher).

◘ Keep the passages and available open spaces in the classroom clear.

◘ When speaking with the VI child specifically, address her/him by name.

◘ Modify/adapt assignments (see pg 23-43 for suggestive examples).

◘ Provide students with tactile graphs and diagrams (see pg 34, 42 for suggestive examples).

◘ Consider alternative assignments (For example: the teacher may rely on blackboard to write questions or problems for the class to copy and answer in their own notebooks; the student with VI, alternatively, can work on the worksheet prepared with questions or problems, and answer them directly in these).

◘ Keep in mind, there may be instances when the VI student may not have had exposure to the material discussed in class and for which the child may not have a prior experiences or references (for example, food in altered form: pop corn v/s whole corn, sliced mango v/s the whole fruit/shape; materials and sources: water-ice, vapor; curd-buttermilk; milk-cows), occupations (tailor, doctor, engineer).

◘ Use educational aids like talking books, tape-recorders, computers etc.

◘ Use of colour, contrast and texture.

◘ Minimise noise so that students with VI can hear you speak.

23
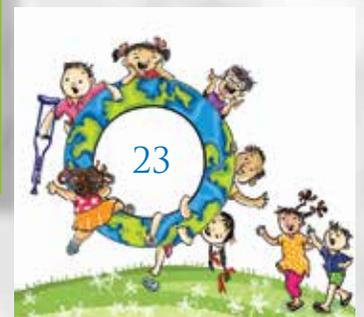
CREATING AN INCLUSIVE CLASSROOM FOR ALL WHEN YOU HAVE A STUDENT WITH VI

◘　When speaking, face the class.

◘　If you feel the VI student is not attentive, touch her/ him on the shoulder or arm to draw attention; this also helps in indicating to the student that you are including her/him in your instructions and discussions.

◘　Provide large print, Braille versions when needed so that the VI child can follow the classroom's text-based teaching and lessons along with the sighted peers.

◘　Assign a peer to provide help or assist when needed. (Tip: To incorporate socialisation goals, and also to help promote acceptance and learning about differences in the classroom, select different peers for different subjects or activities.)

◘　Use real objects to allow the student to learn and experience through touch (You can make your lessons inclusive and also interesting by using hands-on methods, and making as many experiences as you can, interactive.)

◘　Provide students with tactile graphs and diagrams where available. (see examples on page no. 34, 42).

◘　Consider alternative assignments (as explained in the previous box).

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CREATING AN INCLUSIVE CLASSROOM FOR ALL WHEN YOU HAVE A STUDENT WITH VI

- ◘ Use mixed-groups: divide your class in smaller groups, this will allow you to provide closer and needed teaching utilising the concrete material for your VI student.

- ◘ Re-organise the classroom so that you can easily assist the VI student when needed, such as a semi-circle or a circle classroom arrangement.

- ◘ Be flexible in accepting deadline for assignments (to the VI student and to any of the classmates when they are involved in a group assignment, as the student with VI may require more time to process some of the information that would be easily accessible to the sighted peers.)

- ◘ Give specific directions in addressing the whole class (avoid: turn to "this" page instead can use: turn to page number 5).

- ◘ Use verbal expressions to go with facial expression in class.

- ◘ If a VI child is not attending or following your directions, it is likely that s/he does not understand what is the expected behaviour in the classroom (eg. not able to pay attention to you while you are writing on board, the VI child may begin talking to neighbor not realising that the class is following your work on the board). Make sure the student understands what is expected of her/him.
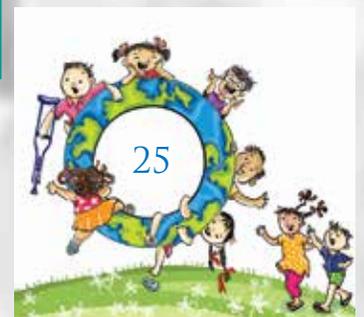
MAKING READING ACCESSIBLE TO A VI CHILD

Issues while reading	What you can do
Erratic eye and head movements	Teach the student to view the target slowly so that it falls in the best viewing area.
Letters may appear to be blurred.	Increase contrast and manipulate lighting.
Lose a line, read only part of the line, unable to find the left margin from the right side of the page	Use finger, paper clip as a marker to point out the beginning. Use coloured marker in margins as visual cues.
Confuse similar looking letters, spell words but not pronounce them. Guess words, miss parts of letters or words	Provide larger print, more contrast, more spacing between letters. You can help them to learn pronunciation.
Read slowly and forget what has been read	Ask the student to pause after reading a few lines or ask him/her to repeat reading.
Crowding effect	Teach the child to slide his/her finger under each word as they are read without lifting it. Ask the child to use a ruler under lines to single them out.

Source: Julka, A. (1999).

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EXAMPLES OF ADAPTATIONS[10]

MATHEMATICS

1. To make the child learn the concept of 'Time', several real life examples can be given. Children can be taken out in the morning, at noon and then in the evening on a sunny day, to feel the difference between different phases of the day.

2. To teach 'Commutative property of addition' put two different things like toffees and balls in two different buckets. Then the children can be asked to count both the materials and add. For example, two toffees and three balls and then three toffees and two balls.

    $$\text{toffees} + \text{oranges} = 7$$

3. To teach the concept of 'Volume', group activity can be conducted. For example, take water bottles of two different sizes and make the children fill the bottles with water. One bottle can be filled with, say, three glasses of water while the other may just take two glasses to fill. Hence the capacity of the first bottle is more. Children can take turns in filling the bottles, counting and recording.

4. The concept of 'Money', can be taught by first introducing notes and coins of different sizes. Then organise fun activity like arranging shop for all students and ask them to purchase items with the money given to them. The child with VI can explore the notes and coins tactually and repeatedly to understand the difference.

EVS

1. Concept of 'Clouds' can be taught with the help of ice. Drop in temperature before rain because of clouds can be discussed in the class and students can be taken to a cooler place like cold store/ fridge to get a feel of that.

SOME EXAMPLES

27

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[10] NCERT textbooks of Class I-V were taken as reference.

SOME EXAMPLES

2. To teach the concept of 'Day and night' children can be made to observe the difference in temperature and noise during day and night. Days are warm and noisy whereas nights are comparatively cold and silent.

3. To explain 'Function of roots', children can be asked to touch an plant uprooted just then and then a plant which is kept uprooted for few days. The child can differentiate between plants that are alive or dead.

4. To differentiate between different animals, apart from tactile pictures or models, VI students can also be introduced to the sounds of the animals.

5. To make the children aware of different types of material like glass, gold etc., they can be asked to touch and feel different textures and then help them talk about it.

LANGUAGE

1. To help the child to start 'making sentence' about him/her, they can be allowed to experience by touch the physical attributes to help make sentences. For example, child can be asked to touch a warm cup and asked to make a sentence: 'the cup is hot'. Similarly, auditory input can be given by different sounds.

2. To teach 'adjectives', children can be exposed to real examples from the surroundings. For example, they can be asked to say something about his/her friend or can be made to touch different textures and explain the experience.

3. For a VI child, pictures should be explained verbally in detail like – what, who, where and when. Based on the comprehension, help them summarise, give oral answers. Experience for understanding can be enhanced by tactile and kinaesthetic input. For example, differences or similarities between lassi and tea.

28
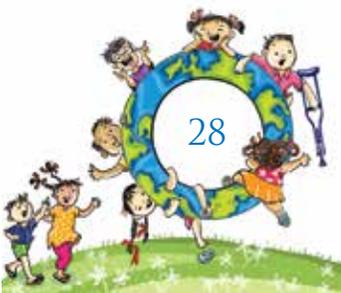
ADAPTING A SAMPLE CHAPTER FOR VI

SUBJECT: LANGUAGE (ENGLISH) CLASS –I (PAGE 45 TO 50) UNIT 4- MITTU AND THE YELLOW MANGO

Sample pages from the original chapter with Suggestions:

Mittu and the Yellow Mango

Listen and enjoy this story

Mittu was a parrot.
A green parrot
with a red beak.
One day Mittu
was flying.
He loved to fly.
He looked down.
He saw a big yellow
mango on a tree.

Mittu liked mangoes.
"I want to eat that yellow mango,"
he said.
He flew down to the tree.

"Caw, caw, go away.
This is my tree," said a voice.
Mittu looked up.
He saw a big black crow.
"Caw, caw, go, go,"
the crow shouted.
He had a very loud voice.
Mittu was afraid of the crow.
He flew away.

45

Concept of colour like 'yellow mango' 'green parrot', 'black crow', 'red beak' can be taught by associating with objects like parrot is green, grass is green, crow is black, hair is black etc.

Activities and demonstrations can be used to explain movement
- Flying can be explained by playing on swings.
- Children can also spread their hands and flap.

29

Concepts like down, under, behind involve position and need to be explained through demonstration:

Stand behind another child, keep the book under the table, go down the stairs.

Mittu saw a red balloon.
It was under a tree.
He had an idea.
   He picked up the red balloon.
He was careful not to burst it.
   He flew to the mango tree.
The crow was sitting on the tree.
Mittu went behind the tree.

   He pecked the balloon with his red beak.
"Pop!" The balloon burst.
It made a loud noise.

   "Caw!" said the crow.
And he fell off the tree.
"Caw, caw, a big gun is after me," said the crow.
   He flew away.
He never came back to the tree.

POP!

46

Concepts like bursting can also be explained through activity.

For example, children touching an inflated balloon and then pricking it to experience the concept of 'burst'.

30

Mittu came to the tree.
He ate the big yellow mango.
"Yummy yummy,
what a nice mango!" he said.
He was very happy.
Clever Mittu!

Chitra Narendran
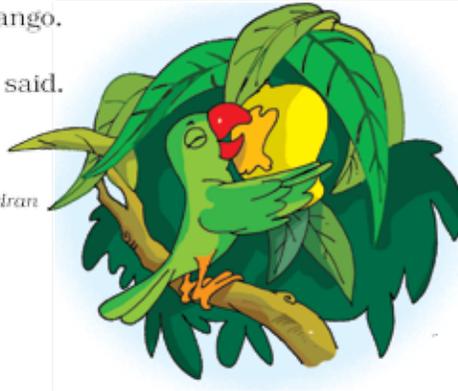
New words

black   crow   mango   parrot

Let's read

I like eating a mango.
I like feeding a crow.

Reading is fun

▸ What did Mittu see on the tree?
▸ What did the big black crow say?
▸ What did Mittu see under the tree?

Let's talk

▸ Do you like eating mangoes?
▸ Do you like green mangoes? Why?
▸ Do you like yellow mangoes? Why?

47

Reading skills can be developed in low vision children using large fonts and magnification. Proper light, good contrast, shorter stretches for reading also help.

31

Let's share

Colour the chilli red and the parrot in colours of your choice.

Colouring can be done in a picture made tactile (recognising shape through touch). The child can be given colours (red, green etc.) for colouring the tactile picture. The child must name the colour/s s/he wants. [explained on page 34]

Sing

Parrot with a red beak,
Can you really speak?
Mittu, Mittu,
Mittu, Mittu!

Trace the path of the lady bird.

48

Tracing

Substitute tracing by passing the thread through holes. [THREAD THROUGH HOLES explained on page no. 35]

32

Match the fruit and vegetables to the trees they grow on.

banana

coconut

apple

grapes

mango

coconut tree

apple tree

banana tree

mango tree

grapevine

49

Adapt this exercise by asking the child to name the colour of the fruit and vegetable, make distinction between fruit and vegetable.

You can think of other alternatives.

33

34
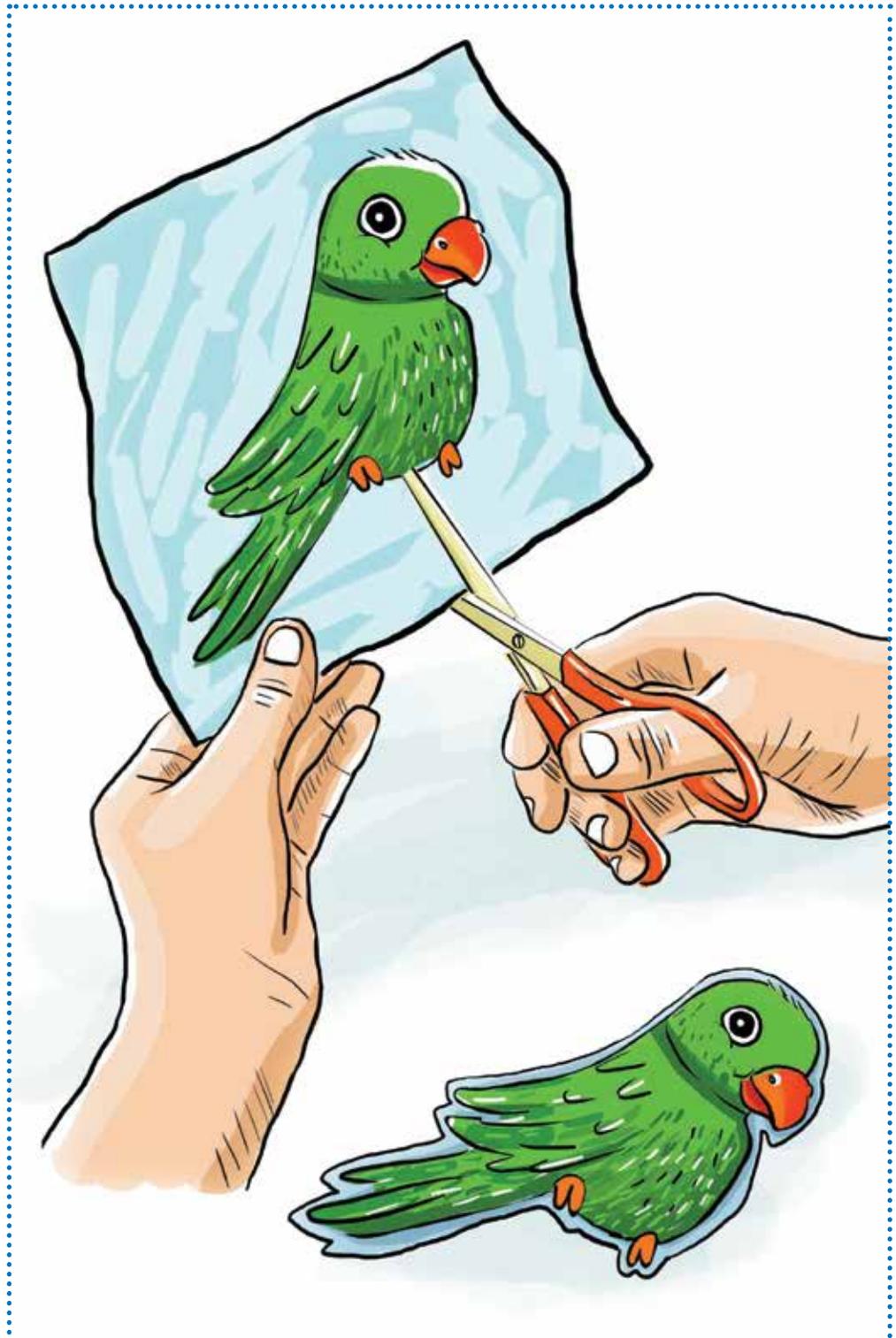
A Tactile is a cut out that can be made out of a thick sheet of paper or cardboard. You may cut the cardboard in a desired shape and the VI child can trace her/his hand along the edges of the shape, to understand its construction.
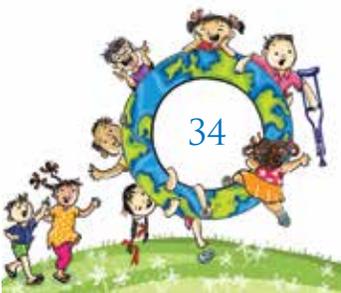
Holes may be cut along the edges of a Tactile and a VI child may be asked to take a thread through these holes. The activity can replace tracing and will not only help the child understand the shape of the object in question but also help with motor coordination.

ADAPTING A SAMPLE CHAPTER FOR VI

SUBJECT: MATHEMATICS CLASS –I (PAGE 144 TO 152)
UNIT 10 - PLAY WITH PATTERNS

Sample pages from the original chapter with Suggestions:

Concepts of patterns can be taught through touch like touching twisted ribbons, concrete objects like window grills, blocks, marbles, beads, pencils etc. arranged in different patterns.

10 Play with Patterns

Patterns Around Us

In everyday life, we see many patterns.

For example, we see:

Barbed wire

Grills of a window
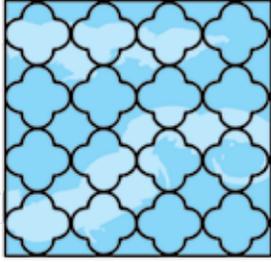
A snake
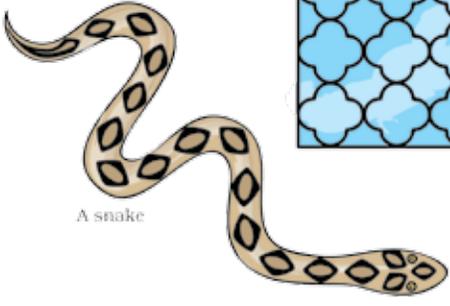
Look around you and list three things in which you find some pattern. _____ _____ _____

Draw some patterns which you have found around yourself.

Pictures in a Pattern

I have made some patterns of pictures. I have used a rule for each pattern.

The rule for this pattern is — There is one girl after every 2 boys. Then this is repeated.

In this pattern there is one arrow up and one down. Then this is repeated.

Practice Time

◆ Given below are some patterns.

Figure out the rule for each and continue the pattern.

a)

b) A A B A A B

146
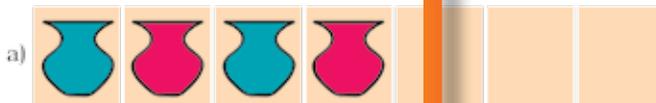
Rules of patterns can be explained through group activity like asking one girl to stand after two boys and so on. Ask the students to tell their names one by one. Other students can identify the pattern.
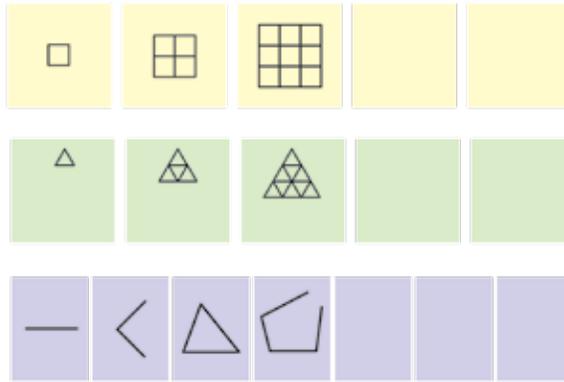
37

Try these also.

My Own Patterns

◆ Here is your space to make your own patterns:

i)

ii)

iii)

iv)

◆ Ask your friends to continue the patterns made by you.

Use objects like potatoes (carved with designs), lady fingers as stamping blocks dipped in colours.

38

Secret Messages

Amrita and Paritosh are writing secret messages.

3W3H3E3E3R3E
3A3R3E 3Y3O3U

3I3N 3T3H3E
3C3A3N3T3E3E3N

Can you tell what they are trying to say?

These are two secret messages. Look for the patterns and find the hidden sentences.

1 I 2 L 3 O 4 V 5 E 6 Y 7 O 8 U

ATBHCIDS EBFOGOHK IIJS KFLUMN

Now you also make your own secret messages.

_____

_____

_____

Organise group activity; facilitate a child with visual impairment to do this.

39

All numbers that end with 1, 3, 5, 7 or 9 are called **odd** numbers.

Write all odd numbers between 400 and 410.

_____

Write all even numbers between 155 and 165.

_____

If we add 1 to any odd number we get an _____ (even/odd) number.

If we add 1 to any even number we get an _____ (even/odd) number.

What do you get if you add an even number to an odd number?

Names in an Order

Adil has to arrange this list so that the names starting with A come first and then come those with B, C, D and so on. Number these names in the order in which they will come.

Sharada		Mahadevan		Tsering		Adil	
Gurinder		Baichung		Harsha		Raja	
Narayan		Kavita		Warsha		Elvis		Jalaj	

Jalaj is proud to have a special name. He says if you read it backwards it is still the same.

Which of the following names have the same pattern? Mark ✓.

Harsh, Anna, Kanak, Munna, Ongbi

This can be done orally and smaller group of words can be used.

ADAPTING A SAMPLE CHAPTER FOR VI

SUBJECT: EVS CLASS –I (PAGE 96 TO 105)
UNIT 12 - CHANGING TIMES

Sample pages from the original chapter with Suggestions:

Chapter 12
Changing Times
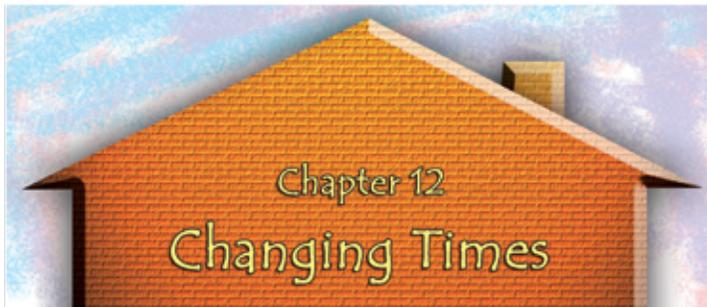
My name is Chetandas. Many years ago I used to teach children like you. These days I spend my time by writing about the days when I was young. I would love to share some of these with you.

A Big Move

I remember the time when I was nine years old. It must have been over sixty years ago. That was when we lived in Dera Gazikhan. Today this place is in Pakistan. At that time, there were a lot of problems all around us. I could not understand what was happening. One day *Baba* told us that we

For the teacher: Before starting this lesson, you can talk to the children about how India got freedom from the British rule, and also about the partition. Show them India and Pakistan on the map.

Models of house, train etc. can be used for learning.

41

Changing Times

had to leave our village and move to another place. I was sad to leave my house and my village. That was where I had all my friends. All of us – *Baba*, *Amma*, my younger brothers and sisters and I took a train to come here, near Delhi. Like us, many people from our area also moved. People were saying that our country was being divided into two – India and Pakistan. Many people from India went to Pakistan just like we moved to India. For some time we all stayed in a camp. We lived in big tents that were put up in a huge ground.

A New Home

One day *Baba* told us that we had been given some land in Sohna village. He said that we could build our house there. I was very happy. *Baba* and *Amma* worked hard to make the house. We children also helped. *Baba* dug the soil, and we quickly filled the pans and passed them on to *Amma*. Gudiya and *Amma* mixed husk in it. *Baba* put up the walls.

We brought cow dung from nearby houses. *Amma* mixed it with the mud. She coated the floor with this mixture, just like she used to do in our old house. *Amma* used to say that this would keep the insects away.

97
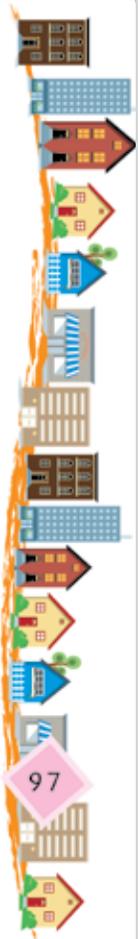
Maps can be made tactile and children can locate on the map the state where they live. The location can be explained verbally also.

42

Looking Around

Then, it was the turn for the roof to be made. *Baba* made a frame by joining strips of wood and fixed it on the four walls. We put branches of *neem* and *keekar* trees on the frame, so that termites would not harm the wood. *Amma* put old gunny bags on this and covered them with mud.

Most of the houses around our house were made like ours. A few were different. But I liked my house the best. It was just like our old house.

Find out and Write

○ Talk to any one of your grandparents or any other elderly person. Find out, when she or he was eight-nine years old –

　○ Where did she or he live? Name that place.

　_____

　○ From what material was her or his house made?

　_____

　○ Did they have a toilet in their house? If no, where was it?

　_____

　○ In which part of the house was food cooked?

　_____

　○ A lot of mud was used when Chetandas' house was made. Why?

　_____

A Changing House

For the teacher: Sohna village is in Haryana. Ask the children to locate Haryana on the map. Point out that when Chetandas' parents built their house, most of the material they used were locally available. Discuss about locally available material and their uses.

98

Relating to real life examples like taking to train compartments, bus, construction site or to see neem and other trees.

43

Notes:

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3. The Nature of Hearing Impairment

Hearing impairment (HI) refers to the condition arising due to significant loss of the sense of hearing. Children with HI include those who experience a significant loss in hearing, even if they use hearing aids. As with any impairment, the nature and degree of hearing impairment will vary from child to child, so in order to learn effectively, each student with HI may require specific adaptations to teaching practices and materials, depending on the type and degree of hearing loss.

DEFINITIONS OF HEARING IMPAIRMENT

To understand HI, it is important to understand the two aspects of sound: **intensity** and **pitch**.

Intensity refers to loudness and is measured in decibels (dB).

Pitch or frequency of sound is measured in Hertz (Hz).

Both these aspects of sound are taken into account while addressing hearing loss i.e., hearing loss can be mild, moderate, severe or profound depending on the degrees of loudness and/or pitch of the sound that a child can or cannot hear. According to the Draft Rights of Persons with Disabilities Bill, 2012, HI refers to loss of 60 decibelsor more in hearing level (HL) in the better ear in the conversational range of frequencies. Hearing loss may be present in one or both ears and can be conductive hearing loss, sensori-neural hearing loss or mixed hearing loss.

CONDUCTIVE HEARING LOSS occurs when sound is not conducted through the ear properly and hence the sound level is reduced, resulting in inability to hear low or faint sounds. This type of loss can often be corrected through medical procedures.

SENSORI-NEURAL HEARING LOSS occurs when the inner ear is damaged, or there is damage to the nerves that help carry sound to the inner ear or to the nerve pathway to the brain. Sensori-neural loss is a common type of permanent hearing loss.

MIXED HEARING LOSS refers to a combination of sensori-neural hearing loss and conductive hearing loss.

SIGNS OF POSSIBLE HEARING IMPAIRMENTS IN CHILDREN

If there are no other environmental or language related issues, the following behaviours may indicate possible hearing loss in children:

◘ Child fails to respond to loud sounds.

◘ Child fails to respond to soft sounds.

◘ Child turns his head to localise (locate the direction) the sound only when it is presented on one particular side of the ear i.e. either left or right.

◘ Child stops babbling after 6 to 8 months of age.

46

◘ Child shows poor or no interest in playing with noise making toys like rattle, bell etc.

◘ Child, when young (one and a half years) fails to start using meaningful words like mummy, daddy, bye-bye etc.

◘ Child does not understand simple commands like 'wave byebye' until and unless speech is accompanied by gestures.

◘ Child insists on watching your face while you speak (because s/he wants to lip read).

◘ Child unable to respond to your call from a distance of 5 ft to 10 ft.

(Source: Adapted from Assess your child's hearing, Ali Yavar Jung National Institute of Hearing Handicapped, Mumbai, http://ayjnihh.nic.in/awareness/audiology9c.asp)

Also, speech may not be clear and even be faulty (baff for bath, wion for lion),that could be understood by only close relatives. Because of poor listening the child may not be able to follow directions. This can sometimes be misunderstood as intellectual disability or the child may be classified as a slow learner.

47

HEARING ASSESSMENT

Children's hearing should be tested periodically, or any time if there is concern about the child's hearing. Children who do not pass the screening for hearing need to get a full hearing test done as soon as possible. The following diagram shows steps for managing HI in children.

Management of identified children with hearing impairment

```
                    Suspicion of hearing
                         problem
                            ↓
                    Refer to professional
                            ↓
                                              Other assessments:
                                                   speech,
                    Audiological (hearing) ←→        language,
                         assessment                 psychological

   Conductive                                   Normal hearing
   hearing loss         Sensori-neural or mixed    sensitivity
                           hearing loss
        ↓                                              ↓
   Refer to ENT                                    Follow up
   specialist          Counselling about use &    evaluation after
   for advice &        maintenance of hearing aid   six months
   treatment
        ↓                      ↓
   Follow up            Auditory training:,
   audiological         speech therapy,
   assessment after     Special educators' help
   treatment
                               ↓
                    Pre-school or school placement
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48

Source: Adapted from Action flowchart for management of identified children with hearing impairment Ali Yavar Jung National Institute of Hearing Handicapped, Mumbai – http://ayjnihh.nic.in/awareness/audiology9b.asp

NEED SPECIFIC APPROACHES

▪ Use other senses as mediums of learning. (Use gestures, body language, expressions, lip reading etc.)

▪ Use adapted material such as visual or sight vocabulary to provide firsthand experience. (Please see 52, 54-58 for examples)

▪ Use assistive devices such as hearing aid, loop system etc.

▪ Teach how to access sound-based information.

NEED SPECIFIC CONSIDERATIONS

▪ Make sure you are aware of the learners' language abilities and preferred learning style to ensure inclusion into the group.

▪ When you have a student with HI in the group, reduce background noise or, request for a classroom that is away from noise. Make sure you have the whole group's attention before starting the session.

▪ Allow HI students to sit where they wish. HI students who can lip read should sit near the front. (Optimum distance for lip-reading is considered to be about 6 feet.)

▪ Face the HI student when speaking.

▪ Use clear speech.

▪ Make sure the room is well lit to allow the student with HI to see your facial expression, signing and/or lip read.

49
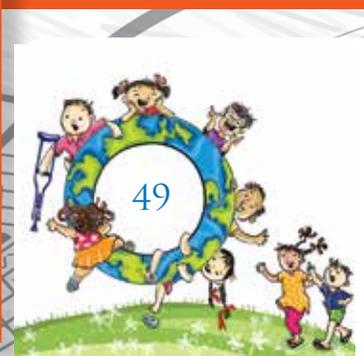
SUGGESTIONS FOR INCLUSION OF A HI CHILD

◘ Get to understand the nature of your HI student's hearing loss and how you can include the student with the rest of your class.

◘ Focus on development of language, communication and concepts in students with HI.

◘ If possible, seek assistance from locally based experts, educators, family members, special educators, speech and hearing specialists, to enhance teaching in the inclusive classroom.

◘ Use assistive device where available, to facilitate teaching-learning in the classroom.

ODD

EVEN

50
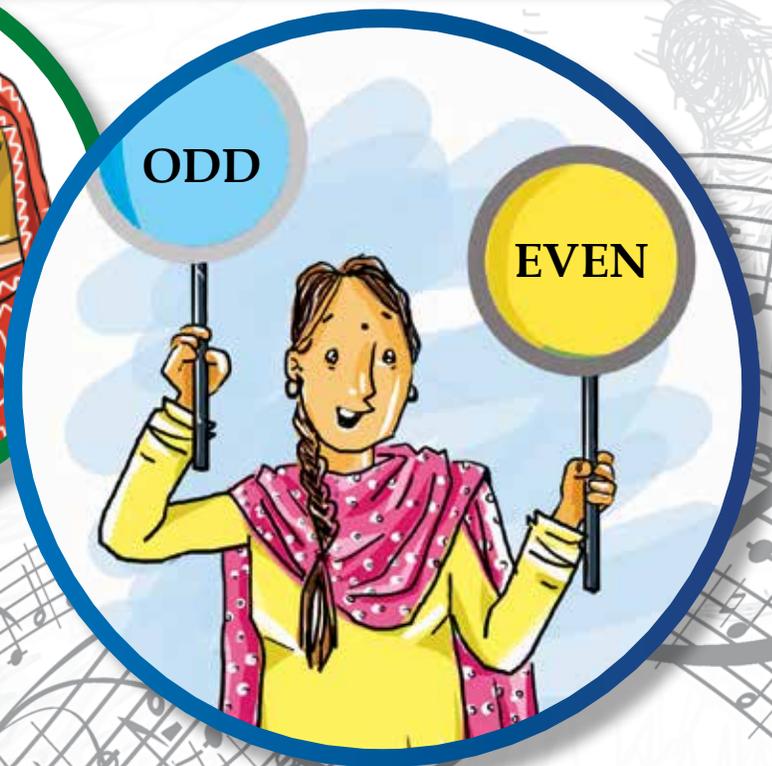
Creating an Inclusive Classroom for all when you have a student with HI

- Arrange the classroom so that students can see each other, e.g., organising the class in a circle or semicircle allows all students to see each other.

- Avoid drawing too much attention to the learners with HI, while maintaining inclusivity of all learners in the classroom.

- When showing diagrams, pictures etc., use slower speech so that the HI child can follow your expressions and also look, study the illustrations.

- Use shorter sentences, clearer speech.

- Associate words with real objects, pictures; for example, the colour concept (examples on pg. 54-58)

- Use pictures (flash cards), real objects, real experiences, dramatisation, and activities.

- You can write key points on the board or chart.

- When utilising group work, make sure that the student with HI can follow all the group members' discussions.

- Develop communication amongst children through play activities.

- Organise groups in smaller numbers.

- Remind the group members to take turns in speaking to allow the student with HI to follow and participate with all.

- Encourage children to develop communication strategies so that they can get into the style of students with HI.

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SOME EXAMPLES

LANGUAGE

1. Concepts can be associated with visual vocabulary. For example, to explain the word direction, picture of an arrow can be shown.

3. Concepts can be taught through activities: For example, a child is given the pictures of a rabbit and a tree. He/she can be asked to paste the picture of the rabbit on/behind/under/beside the tree.

ON

BEHIND

UNDER

BESIDE

52
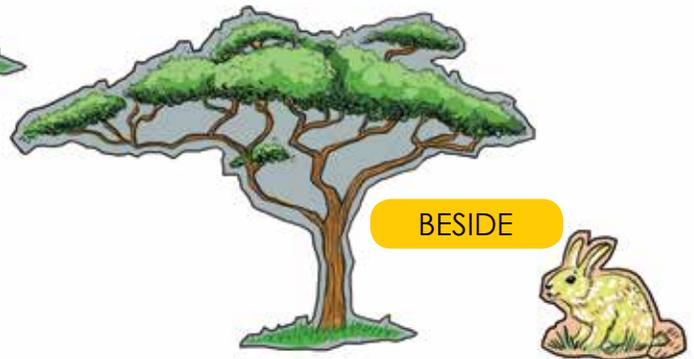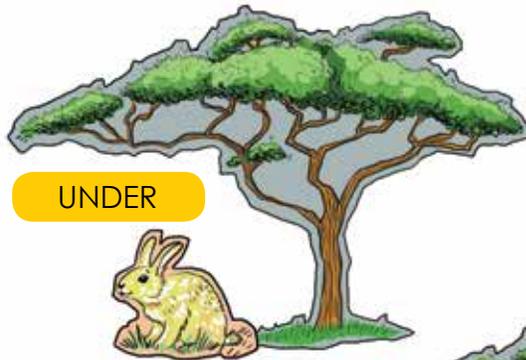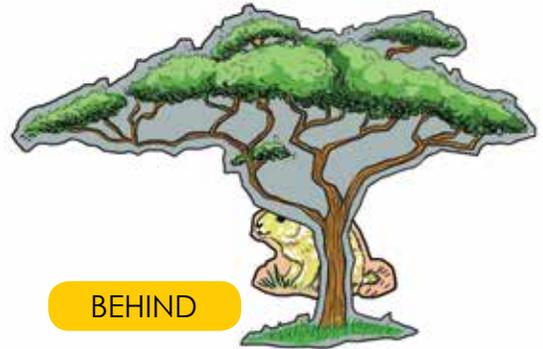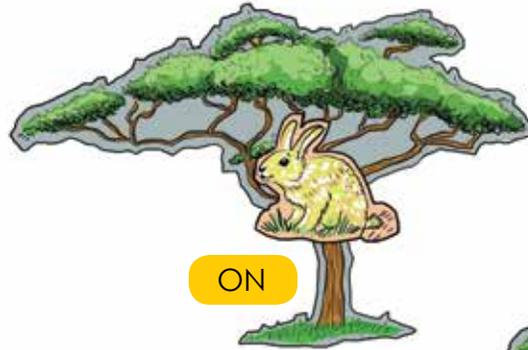
4. Concept of 'nouns' can be taught through stories in written form. The student can be asked to underline the names of person, thing, place etc.

MATHEMATICS

1. Concept of time duration can be taught with simple activities. For example, observing the time taken by two peers during meal time and then assessing who had taken longer time to finish the food.

2. Two digit additions without carry over or with carryover can be demonstrated using simple objects like sticks or beads.

3. Word problems can be understood through real life examples, situations or pictures.

EVS

1. Concept of clouds can be communicated through multimedia and real life experience. For example, show charts with a cloudy sky or relate to outside sky. They should understand that the clouds are above us in the sky.

2. Properties of water can be taught through simple activities like taking a glass of water and dropping stones, leaves, salt, paper etc. into water.

3. Concept of evaporation can be communicated through observations and discussions. For example, the phenomena of drying of clothes, boiling of water etc.

4. Knowledge of sounds can be developed with the help of recorded sounds of birds and animals which can be played on DVD player/ tape recorder on high volume first, gradually reducing the volume. While doing this, there is a need for flexibility and relaxation with reference to the student's response. Rigidity is completely ruled out as some children with HI may not hear certain sounds initially. With practice they will be able to identify and discriminate.

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ADAPTING A SAMPLE CHAPTER FOR HI

SUBJECT: LANGUAGE (ENGLISH) CLASS –I (PAGE 45 TO 50) UNIT 4- MITTU AND THE YELLOW MANGO

Chapter Adapted for Hearing Impairment:

Children with hearing impairment get attracted to and learn better with PICTURES, FLASH CARDS, VISUAL ILLUSTRATIONS, REAL OBJECTS. For example, in the following lesson, teachers can use FLASH CARDS to explain certain nouns and verbs. Along with this some other strategies can be used to explain abstract concepts.

Mittu was a *parrot*.

A *green* parrot.

With a *red beak*.

54
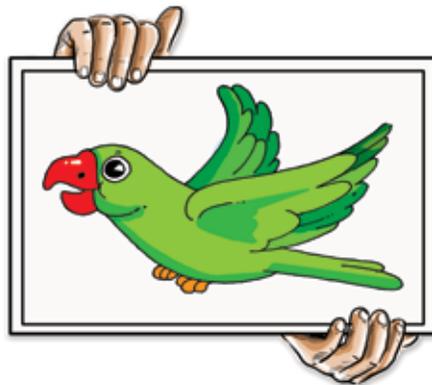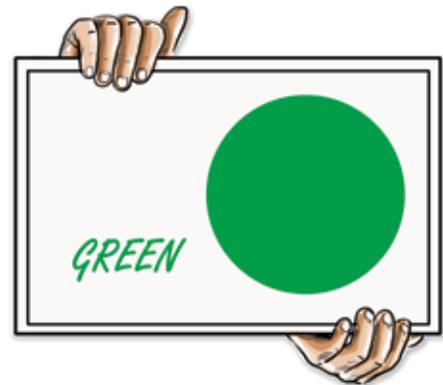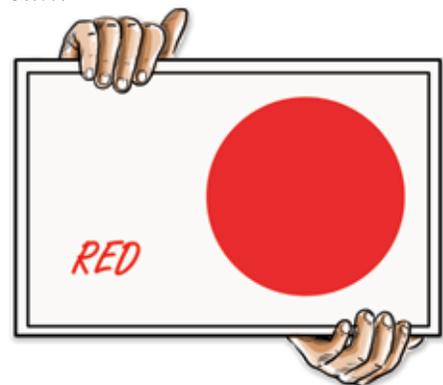
One day Mittu was *flying*.

Fly

Show flying through hand gliding movements.

or

Take the students outside and show birds, insects, airplanes etc.

He *loved* to fly.

He *looked down*.
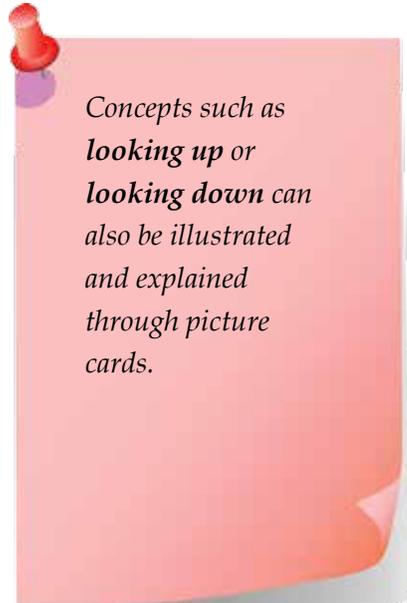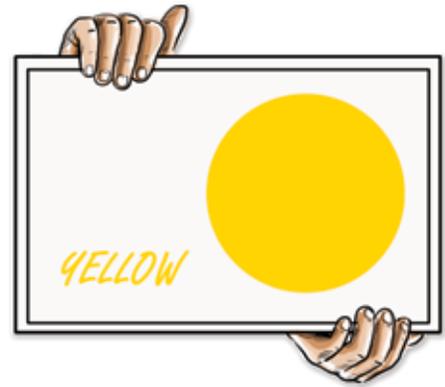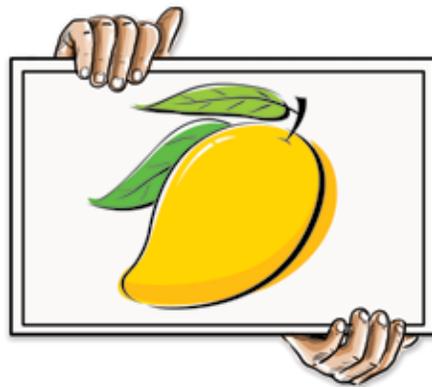
*Concepts such as **looking up** or **looking down** can also be illustrated and explained through picture cards.*

He saw a ***big yellow mango*** on a tree.

Mittu liked mangoes.

"I want to eat that yellow mango", he said.

He flew down to the tree.

Caw, Caw, go away. This is my tree, said a voice.

Mittu *looked up*.

He saw a *big black crow.*
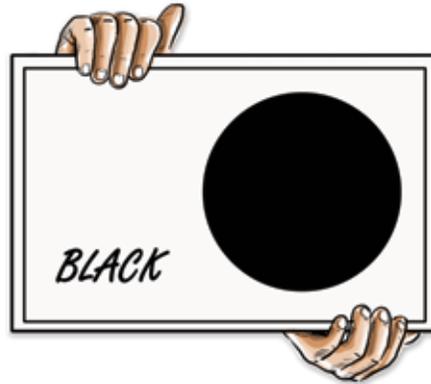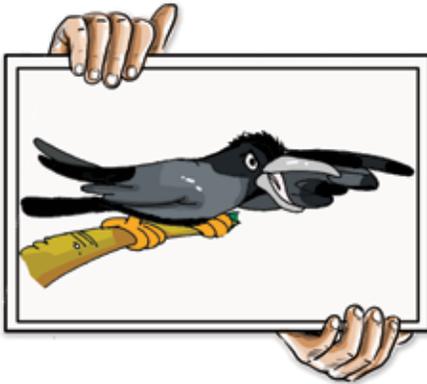
Caw caw, go, go the crow *shouted*.

Shouted

Explain with facial expressions, actual demonstration, give examples of its positive and negative effects.

He had a loud voice.

Mittu was *afraid* of the crow.

He flew away.

Afraid

Explain through expression, demonstration and examples (afraid of snakes, of animals etc.).

Mittu saw a red balloon.

It was under a tree.

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He had an *idea*.

He *picked* up the red balloon.

*Concept of **idea** explained through real life situations and by creating situations in class-rooms.*

***Picked** can be shown through demonstrations.*

PICK UP
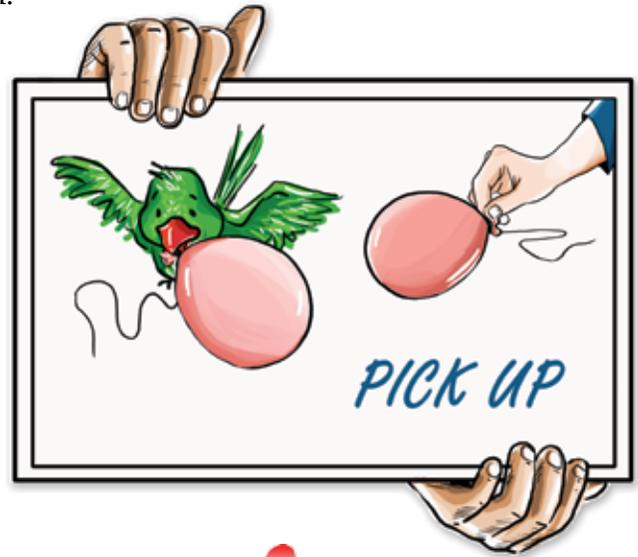
He was careful not to burst it.

He flew to the mango tree.

Mittu went behind the tree.

He picked the balloon with his red beak.

Pop! The balloon burst. It made a loud noise.

Caw! said the crow and he fell **off the tree.**

Caw, Caw, a big gun is *after me*, said the crow.

Off the tree

Demonstrate, give examples of falling like leaves falling off the tree etc.

After me

Demonstrate with the help of activity like one student running behind another student.

GUN
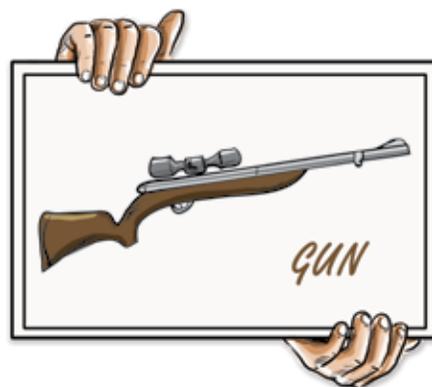
Yummy, Yummy

Explain using facial expressions.

He flew away. He never came back to the tree.

Mittu came to the tree. He ate the big yellow mango.

'Yummy Yummy' What a nice mango!

He said he was very happy. Clever Mittu.

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■ *Some additional fun exercises to increase students' participation:*

Try this: Story narration can be dramatised, shown through sequence of picture cards or power point.

Demonstrate sound through lip and tongue movement.

Teacher will make the students repeat the words:

Deepak loves chocolate.

Who loves to eat chocolate?

Sneha is eating ice cream.

What did Sneha eat?

What do parrots love to eat?

Parrots love nuts, chilli, fruits.

Match colour name with actual colours.

Red	
Black	
Yellow	
Green	

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■ *Adapted Assessment*

Choose the correct word:

- ▣ .... is flying.   (kite, pencil)
- ▣ .... can fly.   (butterfly, ant)
- ▣ .... can fly in mid air. (aeroplane/car)
- ▣ .... are flying in the sky. (Parrots, sheep).

Short answer questions

1. Who is Mittu?
   Mittu is a ....

2. What is the name of the parrot?
   The name of the parrot is ....

3. What is the colour of the parrot?
   The parrot is .... in colour.

4. Draw the picture of the parrot and colour it green.

5. What is the colour of the parrot's beak?
   The parrots beak is .... in colour.

6. The parrot's .... is red in colour.

7. I love my ....

8. I love to eat ....

9. I love my friend ....

10. Tick the one which can fly - kite, elephant, butterfly.

Adapting a Sample Chapter for HI

Subject: Mathematics Class –I (Page 144 to 152)
Unit 10 - Play with Patterns

Suggestions to teach concepts from the Original Chapter:

To start with patterns, teacher can first ask the children to observe patterns in the objects around them like the window grill, in teacher's dress, their handkerchief etc.
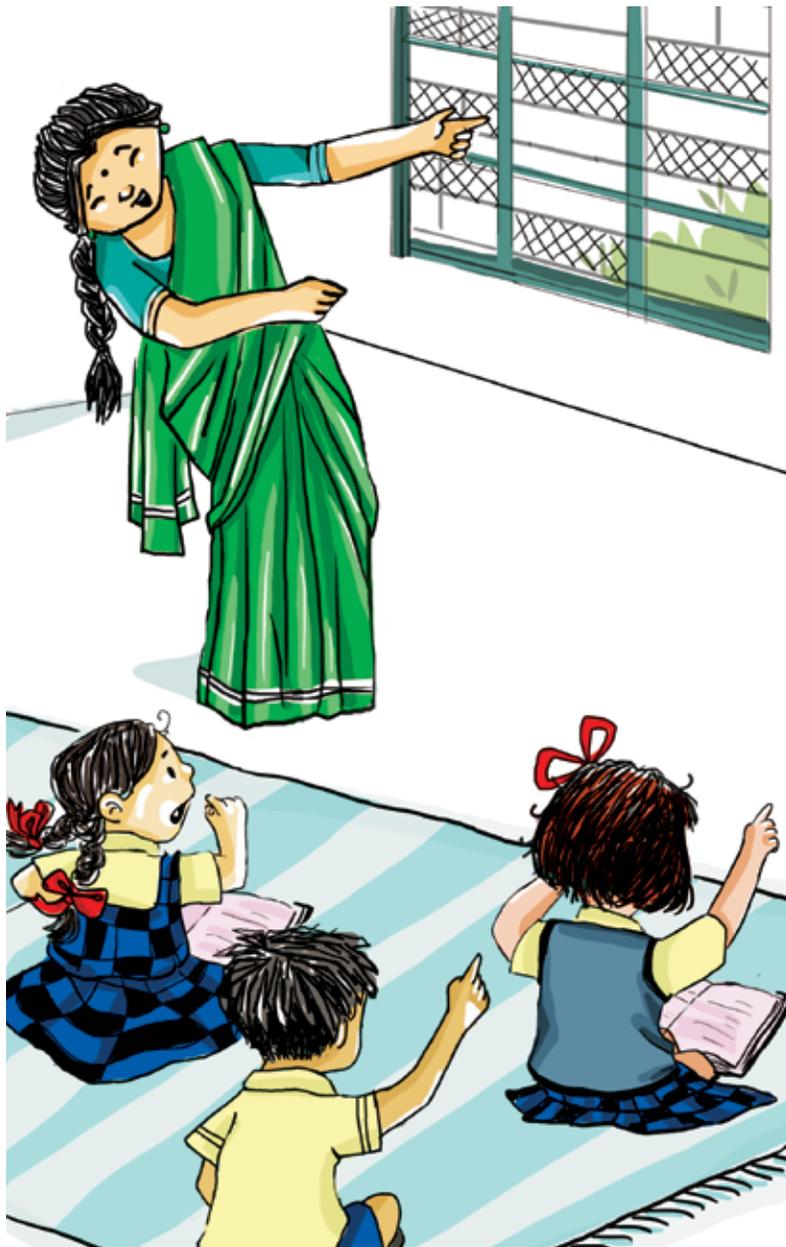
After this, some fun activities can be done in class using TLM. For example, making use of abacus, children can be made to move beads as per the number told by the teacher (25, 35, 55.......). Teacher can do it along with the children in her/his abacus. This can also be done as a group work.
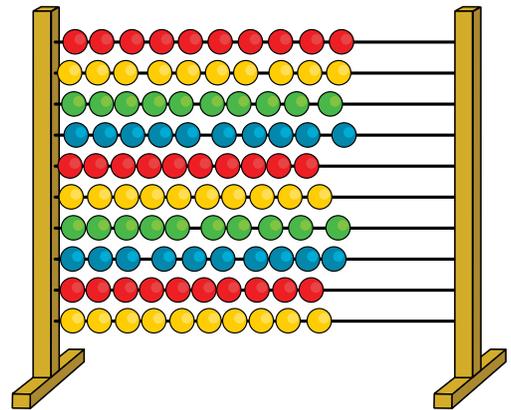
A big number grid can be made and hung in the class. Each child can be called to trace the pattern as called out by a group member or the teacher. For example, the child will come and move the fingers from 2-4-6, 8 and stop at 10. This develops listening skill, tracing; tactual learning.

Another interesting activity would be to give blocks of simple patterns (provided by school) like (-), (X), (L) and colours to the children and guide them to make their own patterns on drawing sheets with the help of blocks.

62
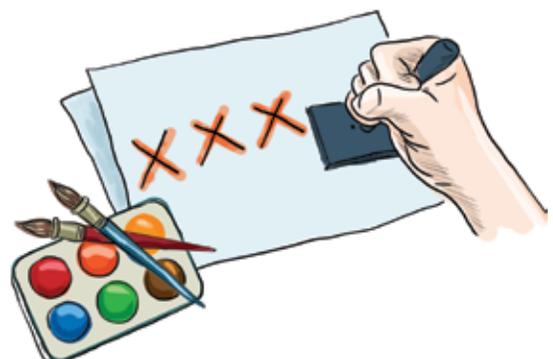
ADAPTING A SAMPLE CHAPTER FOR VI

SUBJECT: EVS CLASS –I (PAGE 96 TO 105)
UNIT 12 - CHANGING TIMES

Suggestions to teach concepts from the Original Chapter:

Other than the use of picture cards and flash cards or presentations to teach some concepts, dramatisation may be used as follows:

Divide the entire time period (given in the chapter) in four parts, demonstrated by four groups in four periods. One group performs at one time. Ask simple questions to the groups for assessment.

Notes:

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4. Students with Physical Disabilities

Physical disability means loss (partial or full) of bodily functions like walking, speech, fine motor skills, bladder control, hand movements etc. It may be present at birth or may develop later due to accident, injury or disease. A child may have one or more than one disability. The disability may be visible like loss of limb, or hidden like epilepsy. Children having the same physical disability may have abilities different from each other and may require different interventions. Physical disability may affect other functions in the child like speech, communication and language, sensory functions, cognitive development, social and emotional development,

activities of daily living and self care etc. When a child has several different disabilities he/she is said to have multiple disabilities.

Definitions : Cerebral Palsy and Locomotor Disability

Cerebral palsy is a disorder that causes problems with movement and balance. It results from damage to the brain or mal-development of the developing brain, resulting in varying degrees of physical disability . The physical disabilities may co-exist with other associated problems of hearing, vision, language and communication, intellectual disabilities, autism, and specific learning disabilities such as dyslexia. Some children with cerebral palsy also suffer from epilepsy. CP is not hereditary, it is not a disease nor is it infectious. It is non-progressive; there is no cure but with early diagnosis and suitable intervention, there is scope for improvement, regardless of the severity of the condition (Training Module on Cerebral Palsy and Locomotor impairment, *Sarva Shiksha Abhiyan*).

Locomotor Disability refers to a person's inability to execute distinctive activities associated with movement of self and objects, resulting from affliction of musculoskeletal and/or nervous system (The Draft Rights of Persons with Disabilities Bill, 2012).

A person with physical disability would require Disability Evaluation and Assessment by a team of experts consisting of Orthopaedic Surgeon, Physiotherapist, Occupational therapist, Prosthetist (to replace body parts that are missing from birth, lost through injury or disease, or which require removal for medical purposes) cum Orthotist, Social Worker etc., working together. Physiotherapy Services and Occupational Therapy Services specially design occupational activities with the objective to restore pre-disability functional status of the individual. Prosthetic and Orthotic services develop devices to correct physical posture and function, such as assistive aids / appliances, taking into consideration the child's individual requirement.

NEED SPECIFIC APPROACHES

For a student with impairment to the lower limbs:

- ◘ Appropriate/suitable seating if not in a wheelchair;
- ◘ Adequate space and height of desk if the student is in a wheelchair;
- ◘ For a student with impairments to hands:
- ◘ Consider alternative to activities involving writing, drawing and other fine motor activities, such as sorting, threading, solving puzzles, etc.

NEED SPECIFIC CONSIDERATIONS

Students with physical disabilities may experience limitations in one of the following ways:

- ◘ Difficulty in writing;
- ◘ Sitting at a standard desk or on the floor;
- ◘ Participating in activities where tables and instruments are difficult to access, such as in art classes;
- ◘ Movements within the class and within the school;
- ◘ Mobility in spaces that are not user friendly for wheelchair users.

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Suggestions for Inclusion of All in a classroom with a Student with Physical Impairment

◘ Make the classroom accessible.

◘ Alternative modes of communicating such as audio recorder, or support for note taking, gestures, pictures, computers may be used.

◘ Provide accessible seating and a table in the classroom.

◘ Make writers available for written work and for tests and exams.

◘ Give additional time for completing assignments/ exams.

Creating an inclusive Classroom for All when there is a student with Physical Impairment

◘ Provide a supportive and welcoming environment by sensitising other students and creating a sense of responsibility in them.

◘ Children should be comfortably seated and with proper posture.

◘ Free movement of students within the class must be ensured.

◘ Students can be shown pictures or other visual cues, concrete objects, a few at a time, for better understanding.

◘ Audio books, daisy books or books on computer, as found suitable, can be used for reading. Alternatively, a classmate can read aloud to the child.

◘ Make use of computers for teaching learning, if possible.

CREATING AN INCLUSIVE CLASSROOM FOR ALL WHEN THERE IS A STUDENT WITH PHYSICAL IMPAIRMENT

◪ For children with problems in writing, modified (large grip) pencils may be provided. A classmate can help by taking notes. Carbon paper can be used for making copies. Extra time for writing should be given if the child is able to write on his / her own and there should not be undue emphasis on the quality of writing as long as it is legible.

◪ Students can use adapted brushes, modified pencils and thick markers that can be gripped easily, for drawing. Alternatively the children can use stamping methods or paste cut outs. The books, papers, brushes etc. can be fixed on the table with the help of tape etc. so that they do not slip down.

◪ For assessment, have students present the material orally or if required, with the help of a scribe. Use objective type, multiple type questions using yes/no or true/false answers

◪ Peer support and/or group work will help in performing various activities like studies, eating, moving around and also sports activities.

◪ Plan alternatives for athletic or cultural activities to encourage participation of all students. For example, while playing cricket, the student can act as umpire. While performing a dance show, the student can perform on a wheelchair or crutches.

◪ Repeat instructions and recheck after student completes one or two exercises.

◪ Mathematics can be taught using concrete objects, matching, sorting and identifying exercises.

◪ In teaching language, written outline, graphics and pictures to support text are helpful. The student may repeat by mumbling to himself/herself. This helps in better grasp.
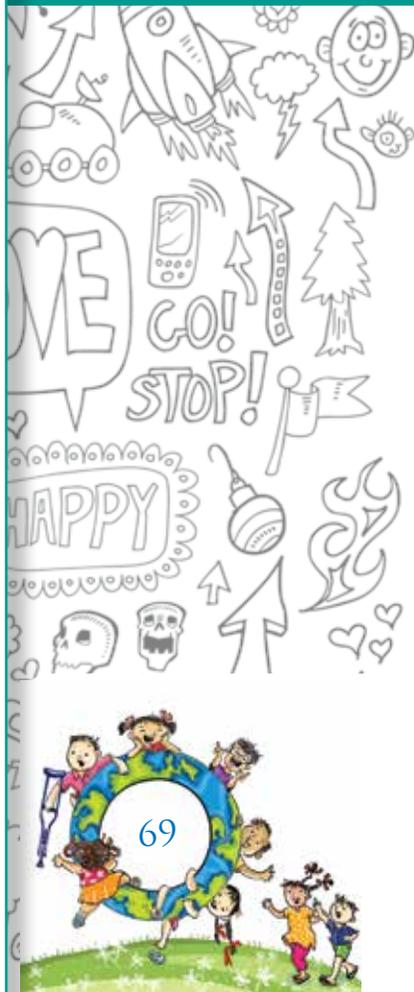
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Notes:

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5. The Nature of Cognitive, Intellectual Disabilities

As mentioned in the 'Introduction', this part of the Section discusses a range of difficulties a child may face due to developmental delays, how the brain processes information, and/or due to reduced ability or strengths of the brain.

Classrooms reflect the diversity of the country – of languages, socio-cultural environments economic and religious backgrounds etc. They are often represented by challenging conditions like poor access to / lack of adequate information pertaining to health, hygiene, nutrition. It is important to keep

in mind that these conditions also limit and impact a child's development which, in turn, can reflect in how a student attends to and learns in the classroom. This section addresses learning needs that we need to focus on that are related to the influences and impacts on the brain.

When we discuss students who are not able to learn or, express their learning, it is important to understand that this behaviour is not a result of sensory, physical or motor impairments. As discussed earlier, for many of these cognitive and intellectual impairments to be identified, a series of appropriate or standardised tests are needed. Many of these may either be not available or easily accessible for a large population of children who depend on the government schooling in India. In addition, as discussed above, many of these children experience significant challenges—due to limited exposure, unequal access to opportunities, and in many instances, challenges related to growing with limited resources or poverty. Such conditions also impact and/or inhibit learning.

This section also provides some suggestions, tips and strategies to create an inclusive learning environment in the classroom, to allow teaching of a group of students with different learning styles, strengths and abilities without making use of definitive labels.

Some Terms/Definitions and Words Associated with Cognitive, Intellectual Functioning [11]

◘ **Attention:** close or careful observation, mental faculty of considering or taking notice of someone or something;

◘ **Cognition:** capacity to make sense of the self and the world through action and language; (*National Curriculum Framework*, (NCF, 2005)).

◘ **Comprehension:** ability to understand information;

◘ **Memory:** process of storing and recalling information;

◘ **Intellect:** faculty of reasoning and understanding objectively, particularly with regard to abstract matter;

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[11] *Information from Oxford Dictionary, 2014*

Classroom Strategies to Include Different Learning Styles and Needs

■ *Planning Your Work:*

◾ Consult with special services providers associated with your student and/or their special needs, e.g. special education teachers, physical, occupational or movement-orientation therapist, psychologists, who may be involved in working with students with special needs (SWSN) in the classroom. Get to know the specific needs, strengths of your SWSN from the special services providers and maintain these conversations to inform your work throughout the time the SWSN is in your classroom.

◾ Understand the needs of advanced learners as well as the learners who may find the classroom learning a struggle for a variety of reasons or causes.

◾ Make classroom rules, daily and/or weekly time-table; display them in your classroom.

◾ Design cues so that the students are aware of when it is time to transition to another lesson or activity, calm down or become at ease, to collect material etc.

◾ Involve children and older learners in planning classroom activities. This will bring in more variety and richness in classroom processes. (NCF, 2005).

■ *Group Work:*

You can divide your class into small groups or pairs for activities such as assignments as well as on-going teaching. This allows you to move from group to group and facilitate learning, incorporating your CCE goals. Teaching the whole class may not offer the opportunities that working

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in small groups would. Projects given to mixed age groups of children, especially in multi grade class situations, lead to learning from each other and achievement of larger tasks which may not be possible if taken up individually. It is important that assignments or tasks that the groups or pairs are engaged in are appropriate and worthwhile for students working in small groups enabling cooperative behaviour to be taught to and used by the students in their group work. These may be structured so that students know what to expect and what is expected of them. Utilising the benefits of group work, the students should also know they are individually accountable for the work (Putnam, 1998). It is important to motivate students with poor social skills to participate in group or play activity by offering suitable reinforcement.

■ *Balancing Team work and Individual work:*

Individual work may be more difficult to supervise or observe. A good way to do this would be to walk around the classroom, provide support or intervention when needed. Create opportunities at these times to engage in CCE related goals.

■ *Reflections:*

Children learn in a variety of ways – through experience, making and doing things, experimentation, reading, discussing, asking, listening, thinking and reflecting, and expressing oneself in speech, movement or writing, both individually and with others (NCF 2005). Use different strategies to promote learning as well as ongoing evaluation of teaching-learning in classroom by utilising a variety of approaches. These approaches should be responsive to physical, cultural and social preferences within the wide diversity of characteristics and needs (NCF, 2005). For example, depending on the needs of the students, the teacher can –

◘ Teach lessons in smaller units and move from simple to complex tasks;

◘ Give more time and practice to children who require it;

◘ Provide concrete concepts;

◘ Use multi-sensory approaches – visual, kinesthetic, tactile and auditory;

◘ Use language and vocabulary the child is familiar with.

Differentiating Instructions in Mixed-ability Groups:

People learn best under these conditions:	Differentiation: We need to attend to student differences because…
What they learn is personally meaningful.	There is no guarantee that all students would find the same things personally meaningful because they may have different backgrounds and interests.
What they learn is challenging, and they accept the challenge.	A set pace, text, or task that challenges some students will frustrate or bore others because students learn at different rates.
What they learn is appropriate to their developmental level.	At any time some students would think more concretely and some more abstractly, some more dependently and others more independently.
They can learn in their own way, have choices, and feel in control.	It is a sure bet that all students would not opt to learn in the same way, make the same choices, or feel in control with the same parameters.
They use what they know to construct new knowledge.	Students would construct knowledge differently because all of them do not know the same things at the same degree of competency,.
They have opportunities for social interaction.	Students would vary in the degree of collaboration required and the types of peers with whom they work best.
They get helpful feedback.	What is helpful feedback for one student may not be so for another.
They acquire and use strategies.	Each student needs to acquire new strategies and use them in ways that are personally helpful.
They experience a positive emotional climate.	Classrooms that may be quite positive for some students are distinctly not so for others.
The environment supports the intended learning.	Students would need varied scaffolding (staging) to achieve both common and personal goals.

From: Tomlinson, Carol A. (2001). How to differentiate learning in mixed-ability Classroom. p. 18, Alexandria, VA: Association for Supervision and Curriculum Development.

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Peer mentoring:

As with group work, it is a good idea to keep changing the pairs to allow for the learners to benefit from learning with different classmates.

Project Based Learning

Project Based Learning (PBL) involves experience based learning in which students involved with the project explore real-world problems and challenges. It actively involves students and helps them engage in learning, encouraging them to obtain a deeper knowledge of the subjects they are studying. Project-based learning essentially involves -

◘ Students learning through direct and/or hands-on learning;

◘ Students having control over their learning, allowing them to learn at their own pace;

◘ Teachers allowed to build on and facilitate learning;

◘ Greater opportunities for students to learn collaboratively when projects are taken up in pairs or groups. (Barron & Darling-Hammond, 2008; Thomas, 2000)

Research has found that students who learn using PBL retain information for longer periods of time, have greater confidence in problem solving and also perform better in tasks that emphasize understanding and application of knowledge, than when engaged in traditional instructional approaches (Strobel & van Barneveld, 2009; Walker & Leary, 2009).

Providing supports and scaffolds:

Use the instructional sequence of teacher modeling first, followed by group practice, and finally, individual practice. Provide supports or scaffolds to students as they are learning new material and gradually withdraw these when they are able to perform the task on their own (Bender, 2002).

Instructional Sequence of Teacher Modeling

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Group Practice

↓

Individual Practice

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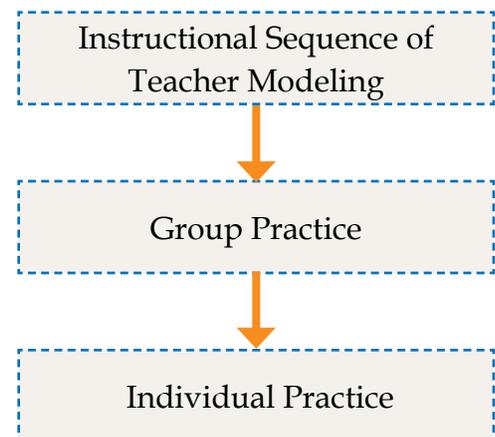
Have the WHOLE CLASS ENGAGE IN AN ACTIVITY THAT THE CWSN IS STRONG AT. This affirmation of learning styles and communication patterns encourages the children to participate better in the classroom processes. For example, tactile learners benefit from hands on activities and/or learning by doing, kinesthetic learners learn through movement and playing games, visual learners learn best through pictures and graphics and have the opportunity to see what everyone else is creating, auditory learners learn better through dialogue, discussions and debates and by talking about what they are doing.

Some characteristics a child might show in the classroom and practical strategies to deal with these:

Characteristic	Strategies
Out of seat behaviour (unable to sit at one place at a stretch)	Provide work in small segments followed by a break, for example, to run a chore (work).
Impulsive behaviour such as throwing material, pushing peers, shouting etc.	Have a structured seating arrangement (preferably in the front bench), activity schedule and physical movement of class inmates. If there is going to be a change in the above, remember to prepare child in advance.
Unable to complete given task	It may be useful to split assignments in small parts with frequent checks for task completion by peer.
Lack of eye contact	Develop a comfortable level of proximity in terms of distance, angle of head etc.
May not give verbal response	Understand how child communicates best, that is, through eye movement, pointing, use of picture cards etc. Make provision to provide required material and accept the response given by the child. Do not tease/scold for the above condition. Provide adequate time for response. Encouragement/reinforcement should be frequent and steady.

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Characteristic	Strategies
Inability to write or slow, illegible handwriting	Provide adequate time or scribe. Do not assess strictly for neatness and handwriting. In case the child is not able to write, allow the child to give a taped report.
Inability to tolerate minute changes in routine	Ensure familiarity and predictability in surroundings (seating, lighting, peers etc.).
Involuntary movements and coordination problems	Have patience and seat the child in a way that gives him/her enough space so as to not disturb classmates. Provide modified pencil; ensure book does not fall off desk. Give short breaks out of the class.

Some Examples of Curriculum Adaptations

Language

◘ Long lessons/stories can be divided into smaller parts with a meaningful beginning and ending.

◘ Poems can be taught through actions and repetitions.

◘ Students with autism need more real experiences and activities in order to learn something. For example, the concept of 'turning' can be taught by doing simple activities like using the fan regulator, tap, gas-stove knob etc.

◘ New words can be taught using a visual dictionary.

◘ While using picture cards, limit to only two colours or use only primary colours as some children may have difficulty in differentiating minor differences in shades of colours.

Mathematics

◘ For place value use scale with unit place having 9-blocks in one colour and another colour at ten's place.

◘ Fractions can be taught through paper folding.

1   *1/2*

Some Examples

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SOME EXAMPLES

◙ While teaching the concept of money, children with ID can be introduced to rupees as paisa but its conversation may sometimes be difficult for them to understand.

◙ Concepts of measurement (tall, short), capacity/volume (full, empty), weight (heavy, light), shapes (circle, triangle) etc., can be understood better through concrete things/ objects, flash cards.

◙ ID students can be given clay to make different shapes. Moreover, instead of giving all shapes together, give one shape at a time.

EVS

◙ Group activities will facilitate active participation and experiential learning. Activity based learning facilitates understanding scientific characteristics of the materials around, for example, different houses.

◙ For teaching 'changing times', the entire content can be divided into parts concept wise. Then narration using real objects can be used as a technique for better understanding.

◙ The concept of rain can be demonstrated by playing recorded sound effects of thunder and rainfall with associated animal and insect sounds.

◙ Picture/flash cards can be used to introduce the objects that are not available, such as, non-regional plants.

ADAPTING A SAMPLE CHAPTER FOR CD

SUBJECT: LANGUAGE (ENGLISH) CLASS –I (PAGE 45 TO 50)
UNIT 4- MITTU AND THE YELLOW MANGO

Sample pages from the original chapter with Suggestions:

Mittu and the Yellow Mango

Listen and enjoy this story

Mittu was a parrot.
A green parrot
with a red beak.
   One day Mittu
was flying.
He loved to fly.
He looked down.
He saw a big yellow
mango on a tree.

Mittu liked mangoes.
"I want to eat that yellow mango."
he said.
He flew down to the tree.

   "Caw, caw, go away.
This is my tree," said a voice.
Mittu looked up.
He saw a big black crow.
   "Caw, caw, go. go."
the crow shouted.
He had a very loud voice.
Mittu was afraid of the crow.
He flew away.

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Related concepts can be grouped like the following

- *Parrot- Name (Mittu), Green, Red Beak, flying*
- *Mango- Big, Yellow, Mango Tree*
- *Crow-big, black, Voice – caw-caw, loud*
- *Balloon- red, pop, burst, flew away*
- *Eating mango-nice, happy*

Concrete objects like balloon, actual models and pictures, strategies like role playing, demonstration, cooperative learning, field visit, repetition of activities, facilitate active participation

Introduce characters, objects, colours at first, like
- *Characters: birds-parrot and crow*
- *Objects: mango and balloon*
- *Colours: green, red, yellow, black*

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Mittu came to the tree.
He ate the big yellow mango.
  "Yummy yummy,
what a nice mango!" he said.
He was very happy.
Clever Mittu!

Chitra Narendran
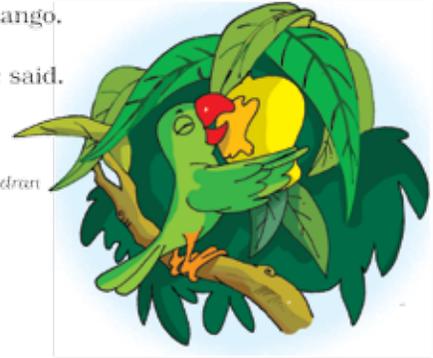
New words

black   crow   mango   parrot

Let's read

I like eating a mango.
I like feeding a crow.

Reading is fun

▸ What did Mittu see on the tree?
▸ What did the big black crow say?
▸ What did Mittu see under the tree?

Let's talk

▸ Do you like eating mangoes?
▸ Do you like green mangoes? Why?
▸ Do you like yellow mangoes? Why?

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Exercises like New Words, Lets Read, Reading is fun can be made interesting, joyful, fun by using pictures and enjoyable actions. Example – 'Do you like eating mangoes' can be replaced by 'Mittu eating mango – yummy yummy'

Let's share

Colour the chilli red and the parrot in colours of your choice.

Sing

Parrot with a red beak,
Can you really speak?
Mittu, Mittu,
Mittu, Mittu!

Trace the path of the lady bird.

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Adaptations with shorter inputs

Instead of 6 pictures 3 pictures can be presented at a time .

Illustrations of trees can be with fruits for better understanding.

83

Match the fruit and vegetables to the trees they grow on.

banana

coconut

apple

grapes

mango

coconut tree

apple tree

banana tree

mango tree

grapevine

49

Clues, verbal prompts, structured inputs help

Instead of asking children to fill colour of your choice and leaving it open, ask them to fill in green colour.

Spots of colours like red, green can be given on the picture as a clue, verbal prompts.

Learn to write

Draw over the dotted lines.
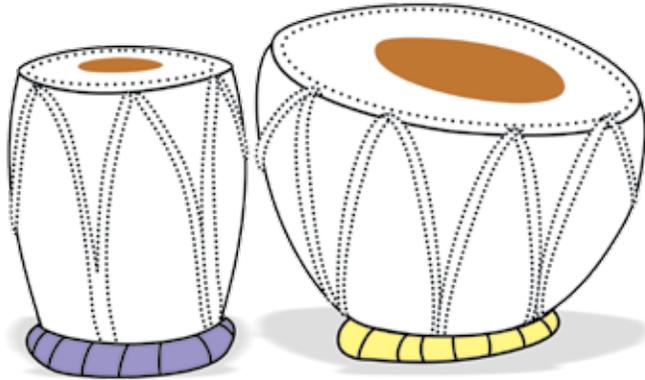
Say aloud

bat	bed	bit	dot	bun
cat	fed	hit	hot	fun
mat	red	pit	pot	run

Choose a letter from the box and complete the words below.

a	e	i	o	u

s_t   p_g   b_g   d_t   s_n

f_n   l_g   s_t   l_t   b_n

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Add pictures of 3 letter words. Use the same words for 'completing the words' exercise

ADAPTING A SAMPLE CHAPTER FOR CD

SUBJECT: MATHEMATICS CLASS –I (PAGE 144 TO 152)
UNIT 10 - PLAY WITH PATTERNS

Sample pages from the original chapter with Suggestions:

For better conceptual understanding Concretisation of patterns using blocks, Stamping/ use of simple patterns and shapes/ group activities.

10 Play with Patterns

Patterns Around Us

In everyday life, we see many patterns.

For example, we see:

Barbed wire

Grills of a window
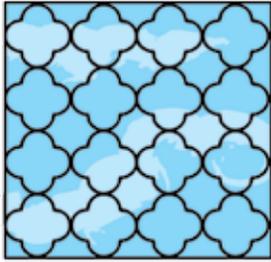
A snake
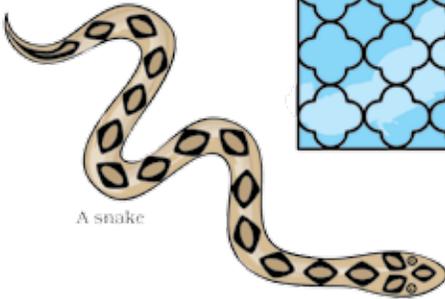
Look around you and list three things in which you find some pattern. _____ _____ _____

Draw some patterns which you have found around yourself.
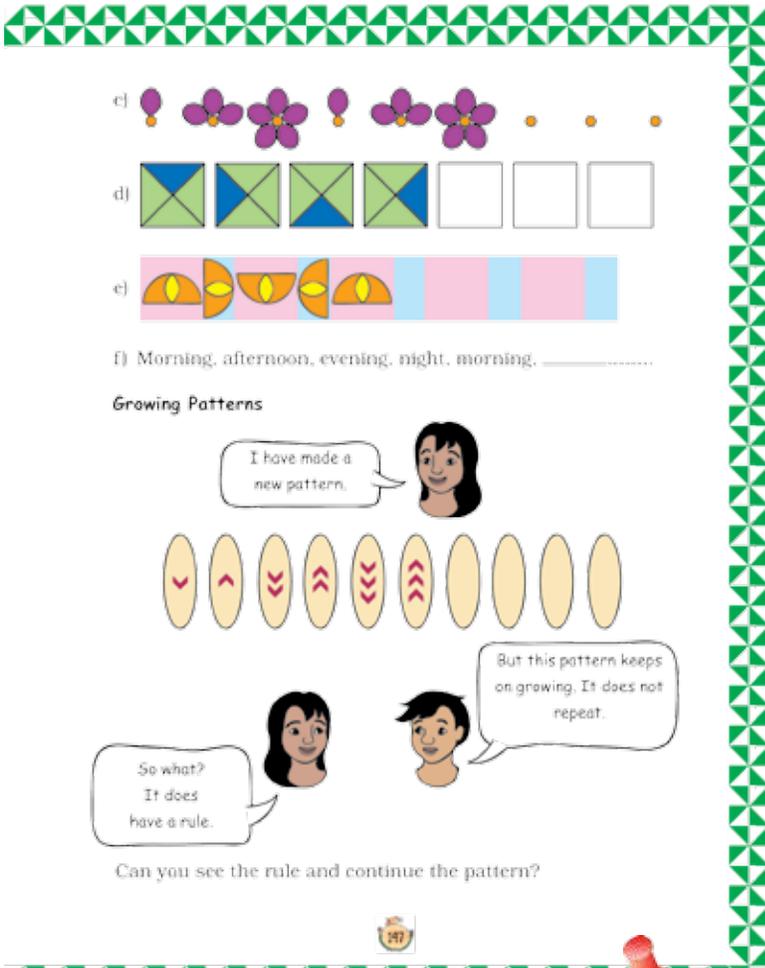
c)

d)

e)

f) Morning, afternoon, evening, night, morning, _____

Growing Patterns

I have made a new pattern.
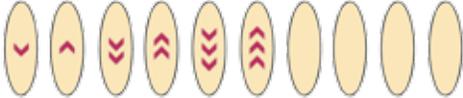
But this pattern keeps on growing. It does not repeat.

So what? It does have a rule.

Can you see the rule and continue the pattern?

Vertical and horizontal patterns can be taught – using dices.

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Try these also.

My Own Patterns

♦ Here is your space to make your own patterns:

i)

ii)

iii)

iv)

♦ Ask your friends to continue the patterns made by you.

Patterns can be made simpler

- Use of stencil, arranging pictures in given pattern.

- Pattern of box, 4 boxes, boxes can be replaced by 1 circle, 1 circle inside another circle.

Number Patterns

We have made some patterns with pictures. We can make patterns with numbers too. Like 21, 41, 61, 81, 101, ...

You know the next number, don't you?

This is a growing pattern. It can go on and on.

21, 41, 61, 81, 101, 121, 141, 161, ...

A. Look for the rules and continue these growing patterns:

a) 51, 56, 61, 66, _____, _____ ....

b) 7, _____, 21, 28, 35, _____, _____ ....

c) 2, 4, 8, 16, 32, _____, _____, _____

d) 12A, 13B, 14C, _____, _____.

B. Look at these growing patterns. Find out what to add to each number to get the next one:

a) 1, 3, 6, 10, _____, _____, _____, _____, _____

b) 0, 2, 6, 12, _____, _____, _____, _____, _____

c) 1, 3, 7, 13, _____, _____, _____, _____, _____

d) 2, 3, 6, 11, 18, _____, _____, _____, _____, _____

This chapter helps children observe and understand patterns around them. They can be given more examples of repeating or growing patterns to recognise the motif or basic unit which generates the patterns. Making secret messages or codes also helps pattern recognition. As their algebraic thinking develops, they will realise that the pattern created by the rule **boy boy girl** is the same as **A A B** or ↑↑↓. Some interesting and important number patterns that relate to mathematical operations are given.
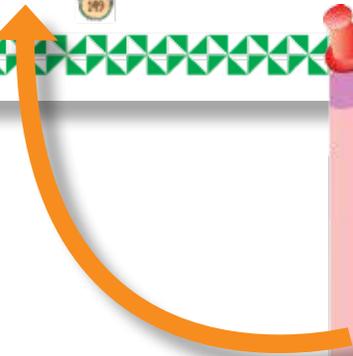
Number patterns of 21,41,61 can be replaced by 10,20,30 etc. and 12A,13B, 14C by 1A,2B, 3C.
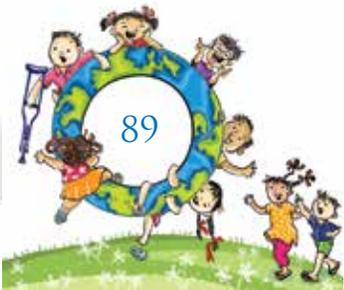
ADAPTING A SAMPLE CHAPTER FOR CD

SUBJECT: EVS CLASS –1 (PAGE 60 TO 66)
UNIT 7- EXPERIMENTS WITH WATER

Sample pages from the original chapter with Suggestions:

Explaining concepts like float and sink , soluble and insoluble , verbally and with experiments/ activities
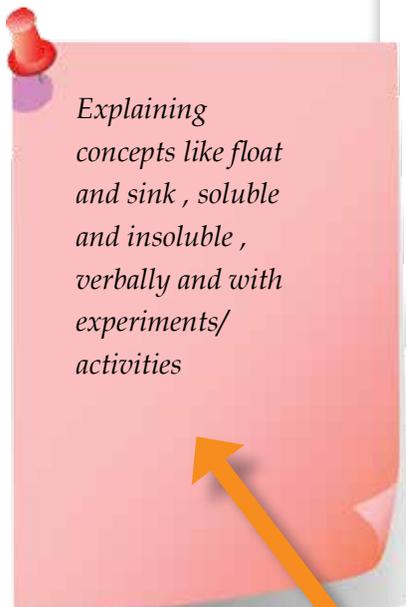
7. Experiments with Water

What floats – what sinks?

Ayesha was waiting for dinner. Today *Ammi* was making her favourite food – *puri* and spicy potatoes.

Ayesha watched as her mother rolled out the *puri* and put it in the hot oil. She saw that at first the *puri* sank to the bottom of the pan. As it puffed up, the *puri* came up and started floating on the oil. One *puri* did not puff up and did not float like the others. On seeing this, Ayesha took some dough and rolled it into a ball. She flattened it and put it in a bowl of water. Alas! it sank to the bottom and stayed there.

Think what would happen if

- Ayesha put a puffed *puri* in a bowl of water. Would it sink or float?
- You put a steel plate on water. Would it sink or float? What would happen to a spoon?
- Would the cap of a plastic bottle **sink** or float on water?

In the evening Ayesha went for a bath. She had just come out when her mother called. "Ayesha, you have dropped the soap in the water again. Take it out and put it in the soap case." Ayesha was in a hurry and the soap case fell out of

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Mark [✓] for the things that float. Mark [×] for those that sink.

Things to be put in water	I guessed, before I did it	I saw, when I did it
(a) Empty bowl (*katori*) (b) After putting in 6-7 small pebbles, one-by-one		
Iron nail or pin		
Matchstick		
(a) Empty plastic bottle with its lid closed (b) bottle half-filled with water (c) Bottle full of water		
Aluminium foil (from medicine packing) (a) open and spread out (b) pressed tightly into a ball (c) in a cup-like shape		
(a) Soap cake (b) Soap cake on a small plastic plate		
A piece of ice		

Find out from the other groups which things floated and which sank in the water?

After doing the experiment, fill in the blanks.

1. The iron nail _____ in water but the *katori* _____. I think this happened because _____

2. The empty plastic bottle _____ on water. The bottle filled with water _____ because _____

3. The aluminium foil _____ when it was spread out. When pressed tightly into a ball it _____. This may have happened because _____

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Looking Around

Assessment with the help of objective type questions like multiple choices and oral responses for long questions.

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Notes:

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6. Continuous Comprehensive Evaluation in an Inclusive Setting

Considering that a lot of work goes in to help students learn, it is important that the teaching as well as the classrooms are organised in a way to enable each child/student to hear encouraging words that convey to them a sense of individualised attention, reaffirm a positive self-image and communicate personal goals to strive for (NCF, 2005). The expectations of the RTE Act, 2009 have already been discussed. The fundamental intent of RTE Act 2009 is to ensure that elementary education reaches all children. Further, with a goal of improving the teaching-learning processes, the Act also specifies certain requirements to help make the schools and classrooms effective

foundations for these processes. Continuous Comprehensive Evaluation (CCE) is one such requirement, implemented for each child in elementary classrooms (NCERT, 2012).

As per NCF 2005, CCE is frequently cited as the only meaningful kind of evaluation. CCE requires careful thinking about when it can effectively be employed in a system. Such evaluation places a lot of demand on the teachers' time and ability to maintain meticulous records for meaningful execution and reliability as an assessment tool. If this simply increases stress on the children by reducing all activities into subjects of assessment, or aids to make them experience the teacher's 'power', then it defeats the very purpose of education.

CCE, as the term suggests should be continuous and on-going. These are not formal tests; rather they should be planned to help assess the student's on-going progress towards the teaching-learning goals. Planning and designing the evaluation should thus be an essential component of teaching. An advantage of CCE, if planned appropriately, is that it helps to check for student's learning, allowing the teacher to intervene as needed and offer guidance, if necessary. Evaluations are helpful to understand how the student is learning, to what extent and whether the teaching and curriculum goals are reaching the students.

Inclusiveness of NCF, 2005

At the stages of Classes I and II, assessment must be purely qualitative judgments of children's activities in various domains and an ASSESSMENT OF THE STATUS OF THEIR HEALTH AND PHYSICAL DEVELOPMENT, all based on observations through everyday interactions. On no account should they be made to take any form of test, oral or written. At Classes III to VIII of the Elementary Stage, a VARIETY OF METHODS may be used, including oral and written tests, and observations.

The previous section presented some suggestions, strategies, ideas and examples to help you create an inclusive classroom when there is/are student/s with disabilities in the classroom. This section presents some suggestions for implementing CCE in an inclusive setting, and prompts you to develop new ways to engage in CCE.

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Some terms explained

Continuous: The term refers to evaluation that is ongoing, formative in nature and not conducted only at the end of a teaching-learning unit. The CCE *Primary Package* (NCERT) explains that evaluating students during teaching-learning process "gives clues about children, which the teacher *can act upon timely* to enhance learning, especially where children are facing difficulties and special help is needed … [it] does not require the use of structured tests which are given to all children at the same time. In this process, they may not even know that they are being assessed. Thus continuous should not mean *more frequent formal tests*."

Comprehensive evaluation refers to understanding the student's learning 'holistically' i.e., to assess the student's learning progress through all aspects of growth and development - social, emotional, physical (including gross motor and fine motor), moral, cognitive aspects.

Collecting comprehensive, holistic information about the student's progress will help get an understanding on "how the child works in groups, does paper-pencil test, draws pictures, reads pictures, expresses orally, composes a poem/song, etc." (CCE *Primary Package,* NCERT). Observing and understanding the student's performance across multiple dimensions of development will help in evaluating the child comprehensively rather than focus only on cognitive or intellectual functioning. This allows you to evaluate the student's express learning, talents and growth in different dimensions, tapping onto some of the strengths that a student may possess which traditional or formal tests would not be able to draw out, for example, athletic abilities, social skills, artistic and/or fine motor activities, abilities such as drawing, painting, singing or dancing.

Difference between Assessment and Evaluation[12]

Assessment procedures focus on learning, teaching and results of the teaching-learning processes. Assessment processes involve students and teachers in gathering information, which helps the teachers, know whether their students are learning, and how effective the teaching-learning in the classroom is. The information is helpful in adapting or modifying teaching to help improve student performance. Information is learner-centered, course based, frequently anonymous and not graded. CCE procedures fall

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[12] *However, these two terms are generally used interchangeably in our country.*

within assessments, since they are not graded (assigned marks) and are formative in nature.

Evaluation focuses on grades and may reflect classroom components other than course content and mastery level. These could include discussion, cooperation, attendance and verbal ability.

Table 1 below summarises key differences between assessment and evaluation, and table 2 presents information about formative and summative assessments.

Table 1: Key Differences between Assessment and Evaluation*

Dimension of Difference	Assessment	Evaluation
Content: timing, primary purpose	**Formative:** ongoing, to improve learning	**Summative:** final, to gauge quality
Orientation: focus of measurement	**Process-oriented:** how learning is progressing	**Product-oriented:** what has been learnt
Findings: uses there of	**Diagnostic:** identify areas for improvement	**Judgmental:** arrive at an overall grade/ score

Table 2: Formative and Summative Evaluations*

	Formative	Summative
Purpose:	to inform teaching and improve learning; used as "feedback devices"	to make judgments about individual student achievement and assign grades
Examples:	tests, exams; report-writing, homework	pose questions, listen to students questions & comments, monitor body language & facial expressions, Classroom Assessment Techniques

CCE in Inclusive Classrooms

CCE can be incorporated in the inclusive classroom while engaging teaching through a variety of activities including the suggestions presented in the previous sections. Incorporating strategies for attending to diverse needs in classrooms would be particularly useful in developing CCE processes for the classroom. NCERT's CCE guidelines, in its publication for primary classrooms, offers indicators of assessment as follows; however, any of the approaches explained earlier, or a combination can be utilised to develop a plan for the CCE in an inclusive classroom:

1. *Observation and Recording*: Reporting, narrating and drawing, picture-reading, making pictures, tables and maps;

2. *Discussion*: Listening, talking, expressing opinions, finding out from others;

3. *Expression*: Drawing, body movements, creative writing, sculpting, etc.;

4. *Explanation*: Reasoning, making logical connections;

5. *Classification*: Categorising, grouping, contrasting and comparing;

6. *Questioning*: Expressing curiosity, critical thinking, developing questions;

7. *Analysis*: Predicting, making hypotheses and inferences;

8. *Experimentation*: Improvising, making things and doing experiments;

9. *Concern for Justice and Equality*: Sensitivity towards the disadvantaged or differently-abled, showing concern for environment; and

10. *Cooperation*.

Source: From NCERT (2013) CCE in Environmental Studies Classrooms, p. 66

General tips for planning CCE in an inclusive Classroom

While planning your lesson and especially for CCE, it is good to remember that assessment occurs throughout the teaching of a lesson. This allows you, the teacher, to recognise and plan the following steps in teaching of the topic. Assessment at the end of your teaching of the lesson helps you to understand how far your lesson and teaching objectives are realised. Following are some suggestions for planning CCE of a student with impairments in the inclusive classroom[13]:

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[13] *Examples from the workshops conducted by the DEGSN, NCERT involving teachers and resource persons teaching children with disabilities.*

◘ In a mixed ability group encourage varied responses for a question and give clear instructions and pause after asking a question to give adequate time to respond. We must remember that activities done for explaining the content can be used again for assessment. Following are some general suggestions:

◘ Allow flexibility in choosing answers, for instance, recognition and identification rather than recall, coloring the correct answer, cut and paste, matching, pointing the odd one out. For example,

– for responses requiring auditory processing, accept responses in monosyllables.

– replace tracing of alphabet activities in the textbook exercises with cut-outs of alphabets allowing the student to explore the contour and shape of an alphabet more closely.

– alternatively allow students with speech processing delays to demonstrate learning by use of pictures or stamps, for example, in evaluating a student's ability to identify key vocabulary work discussed in a lesson – For the Class 1 English lesson Mittu and the Yellow Mango, provide the student with stamps of parrot, crow or mango, asking them to stamp appropriate picture in response to the teacher's calling out the specific word/s. An illustration on how such an activity may be conducted with matching cards and right/wrong stamps is given here.

– allow the student to point to picture/s as demonstration of learning.

◘ Use flash cards, word cards (for example, to introduce words or to construct a grammatically correct sentence), pictures, real objects, to get response rather than only verbal or written response. For example, ask the child to pick up the flash card when you call the name of an animal. Activities such as matching or checking answers can be done with the help of real objects.

◘ Objective type questions or multiple choice questions can be asked by breaking longer questions into smaller parts.

◘ Assessment can be carried out individually or in small groups. Group activities can help assessing child's all round development, and peer support can be utilised whenever required. For example, arrange a play based on a story and assess the child on the basis of involvement and enactment. Ensure participation of all children or make small groups.

◘ Children with attention problems can be assessed in steps by breaking down the content.

Identifying prior experience of children helps the teacher to select the appropriate teaching-learning method/ approaches.

◘ Informal discussion with children revealed that some of them could name some plants as well as identify a few parts and uses of some plants. They are able to relate these with their surroundings. A child could even relate plants with daily life to further work on the desired concepts that s/he intended to take up.

◘ To make the students' understanding deeper, s/he thought of providing children a hands-on experience, as the topic was about plants which were available in plenty in their surroundings.

◘ S/he decided to take up this lesson through a nature walk to a nearby area rich in natural plant diversity.

Source: Adapted from NCERT, (2013). CCE in Environmental Studies Classrooms, p. 67

Some Specific Examples

The following table suggests a format for CCE in inclusive classrooms which the teachers can develop, followed by more specific examples of consideration for CCE.

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Table 3: Suggestive template for planning and conducting CCE in an inclusive classroom

Lesson	Approach to teach or organise the class	Teaching	Plan for CCE
Whole lesson or part/s of the lesson i.e. ideas, reflections on specific lesson concepts, exercises	How to plan to organise the class for the specific lesson or part of the lesson: whole Group, Peer groups, Group work, project work etc.	Inform students of the cues, clarify expectations, Outcomes, answers to questions or exercises, essay, or a product	Aspects to assess, Processes to consider for assessment, Plan to assess multiple dimensions of student engagement and learning: responsibilities taken, initiative, team work, presentation through multiple expressions of learning: through paper-pencil products, as well as creative expressions such as drawings, poetry, sculptures, pictorial presentations and forms of arts

The following Table 4 offers sample illustration of planning for CCE in an inclusive classroom which has students with impairments, for the lesson: It's Raining, EVS Book pg. 57. Each teacher can be creative and develop a plan that he / she thinks to be most suitable and useful for the specific group of students.

Sanajaoba could not distinguish between smooth and soft. Then Liklai helped him by letting him touch a trunk of *Uning thou* (timber) which was smooth but not soft and trunk of *Khamen* (Brinjal) which was soft but rough.

Source: Adapted from NCERT (2012). CCE Package, p. 69
http://www.ncert.nic.in/departments/nie/dee/publication/pdf/CCE_Primary.pdf

Table 4: Using teacher's observation and timely feedback in CCE

Example of objectives	Examples of CCE indicators from NCERT guidelines	Creating and utilising opportunities for including student with impairments
Many plants are sources of food.	Discussion, explanation classification, questioning	Whole group / Small group activity
Understand, recognise that plants are living things and need water to grow	Observation, recording, experimentation	In pairs, allowing for closer and needed teacher intervention for student with specific learning needs. The opportunity will also allow the teacher to engage special interventions more directly, such as providing more hands-on inputs to a student with visual impairments, providing greater or detailed information to students with hearing impairments or those with specific cognitive needs.
Learn importance, uses of water.	Discussion, explanation, expression	Utilise opportunities to express learning in multiple ways, also building on the specific students' abilities, preferred learning styles and creativity.
Interdependence in nature, reciprocal relationship amongst species	Discussion, cooperation, explanation	Group work

Source: Adapted from NCERT (2012). CCE Package, p. 69
http://www.ncert.nic.in/departments/nie/dee/publication/pdf/CCE_Primary.pdf

101
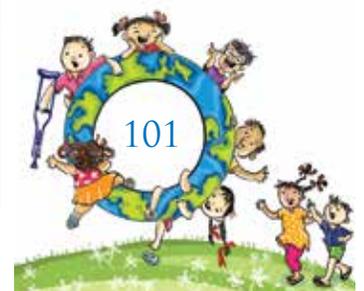
SOME EXAMPLES

SOME EXAMPLES OF CURRICULUM ADAPTATIONS

■ *English*

Skill	Teaching	Assessment
Writing	Start with basic sentences.	▪ Fill in the blanks using: black, sweet, fast, tiny The mangoes were ------- The rabbit ran----------- Ant is a --------------- insect My hair is ------------
	Show pictures, graphic representations to establish meaning (helpful for all students, especially with HI).	
	Enhance tactile experiences for understanding attributes of various objects (the leaf is smooth and green) – colour, texture, volume (helpful for all students, especially with VI)	
	Use role play, dumb charades, other guessing games – Rohit is drinking milk, water.	▪ Use peer for writing oral response or provide a scribe when required
	Encourage varied responses.	▪ Pointing, un-jumbling of word flashcards for completing a sentence.
	Use auditory inputs.	
	Use word flashcards.	
	Help extension of sentences with details – when, how, which.	
	Encourage group work.	▪ Colouring, pasting, or demonstrating answers.
	Provide prompts – words, starters, pictures, experiences.	
	Demonstrate how sentences can have different endings. For example, My hair is short, black, and shiny.	
	Use story maps.	
	Brainstorming – for example, on W questions – where, when, which, why?	▪ Assessing in steps/ breaking down items for assessment.
	Use word banks, examples.	
	Use music, sounds (leaves rustling) to enhance expression.	▪ Oral answers and kinesthetic activities.

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■ *EVS*

Topic	Teaching	Assessment
Family and Friends	▪ Content can be reduced for some children. ▪ Discussion, observation, story-telling, role play, buddy(peer) system. ▪ Enactment of different roles and celebrations in the family. ▪ Multisensory - visual, auditory, smell, touch. ▪ Group Work. ▪ Explaining abstract concepts through simple activities. ▪ Identify family members by pointing or naming or matching, sequencing (flash cards) or listening to voices of family members. ▪ Colouring pictures.	▪ Assessment can be made on reduced content. ▪ Work sheets – True, false, fill in the blanks, odd one out, choose the correct answers – answers can be shortened, if required. ▪ Drawing and pasting pictures of relatives at different stages of their lives, festivals; ▪ Embossing for tactile tracing; ▪ Oral answers; ▪ Games – quiz; ▪ Designing pamphlets.
FOOD	▪ Using flashcards to convey sequence of events (could be embossed also). ▪ Discussion and descriptions. ▪ Enacting a market scene.	▪ Making collage with pictures of different food items eaten on different festive occasions - seviyan, kheer. ▪ Enacting, describing a *mandi*/market/ haat. ▪ Using the sense of smell and taste for identifying different food items.

SOME EXAMPLES

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SOME EXAMPLES

■ *Mathematics*

Content	Teaching	Examples Of Assessment
Spatial Understanding	• Use gestures, pictures, flash cards, charts, cut outs, embossed pictures, verbal instructions, hands-on activities. For example, Taking children to the field/ playground and giving simple instructions like – go stand near the bicycle, keep the ball and the chair etc. • Use of rhymes like Rolly-polly up-up-up, down-down-down. • To avoid confusion similar concepts should not be done together, like on-under, above-below, for some children.	Activities like making the VI child stand between two children at different distances. Then ask the child to walk to the right and count the steps; came back to the centre, then ask the child to walk to the left and count the steps.

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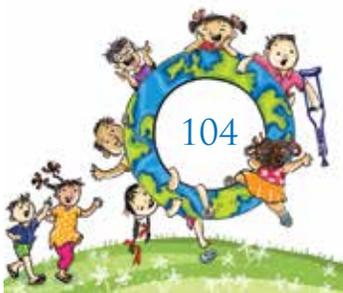
7. SOME CONCERNS VOICED BY TEACHERS

Some experts support the use of gestures while teaching children with HI, while others advice to refrain from using gestures too often. What should we do?

Research supports the view that using hand gestures along with speech for teaching boosts learning in children. The modalities used under both are different and by combining gestures with speech, the child can be taught the meaning of concepts better than when only one modality is used. All children benefit from gestures, specially the HI for whom speech may not be the preferred modality for learning.

The child prefers left hand to write but parents insist that he / she should write with the right hand. What should we do?

Hand dominance in children may vary from child to child but our society generally prefers right-handedness. This may also be because of the fact that our environment is more tuned for right handers than for left handers. Sometimes teachers are pressurised by parents to encourage the development of right handedness in children even when the child is left handed. It must be understood that our brain is divided into two equal halves called the left and the right hemispheres. Right side of the brain controls the left part of the body and left side of the brain controls the right part of the body. Forcing a left-handed child to become right handed may cause reduced activity in the dominant right hemisphere and increase activity in the non-dominant side. This can affect the child's personality while growing up because the dominant side of the brain becomes less active and the less dominant becomes more active making adaptability difficult. Forced right handers may need to put in more effort and time to improve handwriting and in performing some other activities, and may get tired easily as compared to the natural right-handers.

A child always moves in the classroom, makes sounds, sings songs and creates distraction for other students. How is such a child to be handled?

The behaviour demonstrated by the child definitely serves some purpose for that child. It may be providing some relief /escape from something the child does not enjoy. Such behaviours result in the child being either left alone or turned out of the class, or sometimes being ignored. The child feels that such behaviour can provide relief from a difficult or unpleasant task.

It is important for you to understand not only what the child does but why s/he does it. Once you understand the reason behind the behaviour you can change the situation itself or certain aspects that lead to such behaviour. Also, you can promote alternative/positive behaviours by giving rewards. For example, if a child draws your attention to some difficulty in learning and you solve that difficulty, the child is likely to continue communicating his/her difficulties to you in future also because you have given positive attention to the child. It is possible that some children may need a show of anger for their behaviours and also modification in the responses of other children so that this behaviour does not result in secondary gains (gaining attention, if that is intended).
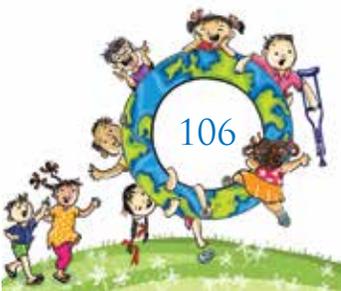
Should there be a special curriculum for CWSN?

The necessary balance between regular curricula, developmental curricula and additional curricular areas varies according to the strengths, needs and circumstances of the particular student. Schools have the responsibility of providing a flexible curriculum that is accessible to all students. Instead of a special curriculum, the existing curriculum must provide appropriate challenges and create enabling opportunities for students to experience success in learning and achieve the best by their potential. Teaching and Learning processes in the classroom should be planned to respond to the diverse needs of students. Teachers can explore positive strategies for providing education to all children, including those perceived as having disabilities. This can be achieved in collaboration with fellow teachers or with organisations outside the school (NCF, 2005). Parents, professionals and other community members can also support in developing a flexible curriculum.

One teacher has to handle two to three classes at the same time. In that case, is it possible at all to pay special attention to one particular child?

The NCF, 2005 clearly indicates that single and two-teacher primary schools could be re-conceptualised as a learning group with different abilities and learning needs, rather than as 'multigrade' classrooms requiring time-management techniques. The multigrade or multilevel classrooms allow for a variety of teaching and learning styles, emphasises cooperation and encourages involvement with peers.

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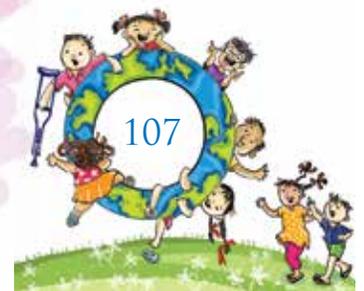
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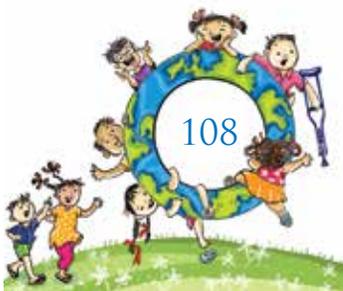
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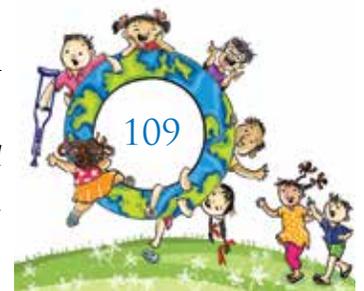
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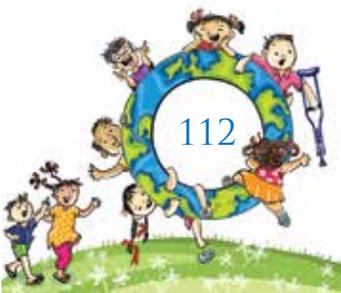
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ANNEXURE II – LIST OF BRAILLE PRESSES IN INDIA

S. No	Address
1.	The Regional Braille Press, Ramakrishna Mission Blind Boy's Academy Narendrapur 743 508 24 Paraganas West Bengal
2.	The Director Sri Ramakrishna Mission Vidhyalaya College of Education Coimbatore (Tamil Nadu)
3.	The Secretary General All India Confederation of the Blind Braille Bhawan, (Near Rajiv Gandhi Cancer Hospital) Sector V Rohini, Delhi - 11000 85
4.	The Manager Govt. Braille Press Tifra Police Line Road Bilaspur 495 223 (Chattisgarh)
5.	The Manager Regional Braille Press Govt. High Secondary School for the Blind Poonamallee, Chennai 6000 56 (Tamil Nadu)
6.	The Manager Government Braille Press Govt. Blind School, Tilak Nagar SayajiRao Road Mysore (Karnataka)
7.	The Manager Braille Press Govt. Institute for the Blind Jamalpur Ludhiana (Punjab)
8.	The Manager Govt. Braille Press Near Govt. Blind School Vaishshta, Guwahati (Assam)
9.	The Manager Braille Press, National Association for the Blind 11 Khan Abdul Gaffar Khan Road Worli Surface, Mumbai (Maharashtra)
10.	The Manager National Federation for the Blind Braille Press, Near Atamshudi Ashram Delhi Raod, Bahadurgarh (Harayana)
11.	The Executive Director Blind People Association Dr. Vikram Sarabhai Road Vastrapur, Ahmedabad (Gujarat)
12.	The Manager Kerala Federation for the Blind KunuukuzhiTrivendrum Kerala
13.	The Secretary LKC Sri JagdambaAndhVidyalayaHanumangarh Road Sri Ganganagar (Rajasthan)
14.	The Hony. Secretary Red Cross School for the Blind City Hospital Road Behrampur 760 001
15.	The General Secretary Christian Foundation for the Blind India Braille Press, 2 Officers Lane GST Road Pallavaram Chennai
16.	The Poona Blind Men's Association Technical Training Centre 109 Dr. Helen Keller Road RamtekdiHadapsar, Pune- 411 012
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Source: Ministry of Social Justice and Empowerment, http://socialjustice.nic.in/brailpress.php

Notes:

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Your classroom will reflect the spirit of inclusivity when your students witness your efforts to be inclusive of all and begin internalizing it themselves. This is demonstrated in your approach to the students, your child-friendly, disabilities friendly and inclusive language, teaching practices and classroom organization. When all the students feel included, it will reflect in their own approach to each other, making your work at creating inclusivity easier. Hopefully, this handbook will help you towards creating such a classroom, where all in the classroom feel that they are equal participants to what you, the teacher, have to teach them.