Early Intervention in Inclusive Education in Mumbai

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The 'Why' and the 'How'

Manual 8

How to Design an Ecologically Enriched Curriculum



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Foreword

The 'How to Series of Inclusive Education' is a set of manuals that have emerged from a study undertaken by The Spastics Society Of India, Mumbai in collaboration with UNICEF and supported by the Canadian International Development Agency (CIDA).

The title of the project is *Inclusive Education Practice in Early Childhood.* It is an action research project involving both intervention and research on a large scale covering 6000 families based in the impoverished areas of the Mumbai slums. Six hundred children, both disabled and non disabled, were placed in Demonstration Learning Centres within the community where an enrichment programme and a need based intervention was given over a two year period. The intervention strategies were carefully documented and the progress of the children tracked by external researchers not connected with the intervention team. The aim was to study the mechanism or *intervention* strategies needed to put *children with disabilities* into existing programmes being run by Government and non-Governmental agencies and the barriers that came in the way to accessibility and participation.

From this evidence based research emerged a series of instructional resource material: the *'How to Series of Inclusive Education.'* These manuals are relevant for any organi-sation, or agency, working to address the crucial need of bringing *children with any disability* into inclusive settings. They recommend *a whole community approach to inclusive education*, and although the research was carried out in India it can be used anywhere in the world.



Enrichment Programme Manual

The Enrichment programme has been based on the ecological inventory. It takes care of critical areas of growth and development of the child in the age group of 0-6 years. The enrichment programme covers 10 areas:

Ten Point Programme

- 1. Visual-perceptual training programme
- 2. Language programme in English and Hindi
- 3. Pre-Reading / Number and Writing programme
- 4. Creative Activities
- 5 Music and Movement
- 6. Free Play
- 7. Dramatics
- 8. Yoga and Prayers
- 9. Ethics
- 10. Sports and Playtime

Visuo-Motor

Aim: To teach co-ordination of wide arm and hand movements

Activity	Method
a. Rowing a Boat	§ Make the children do the actions with one hand first
b. Swimming	and then using both hands
c. Turning a bicycle upside down and turning the pedals.	
d. Opening cans and bottles	
e. Washing the floor/wall	
a Climbing jungle gym/ tyre/rope b Jumping rope	§ Use both hands for these activities
Tearing and pounding	 Tell the children to tear the waste paper into small pieces. Put them in a tub or a flat dish with sides that are wet. Give the child a wooden stick or anything that is a little heavy for pounding the wet paper.

Hitting the target	 § Ask the child to hit a rocking toy's (doll which comes back to the initial position) nose. § Swing a 'hit me' towards the child and ask him to catch
	§ Put lots of small plastic balls in a bucket of water and tell the child to hit the balls that come out and float so that no ball is on top.

Aim: To teach co-ordination of specific arm and hands movement through various activitiesn

Activity	Method
Finger painting	§ Give the children a bowl containing watercolour. Ask them to dip their finger in the colour and get the Imprint on the given paper.
Liquid starch painting	§ Put a spoonful of liquid starch on a sheet of paper. Make the children blend the colours with fingers and hands.
Making mud pies and chapattis	§ Mix mud & water. Make a dough, pat it into shape

	with your hand. § Wheat dough can be rolled into chapattis with a rolling pin
Movement	§ Have the child hold onto a big stick with both hands, and then move the stick up and down or back and forth so that he "feels" both arms moving together
Finger play	 § Draw faces on the fingers and enact songs and poems. § Make paper finger puppets by attaching a circle with a face drawn on it.
Hand puppet	 Cut a paper circle and draw a face on it. Attach this to a strip of paper. This larger ring fits around four fingers at once.
Wrist movements	 Practice a twisting wrist movement by transferring a small, heavy ball or block from one hand to another. Let the object fall from one palm to the other.

Tearing	 Tear paper into pieces and then use the pieces for some project. Cut cloth/ paper into definite forms. (The number concepts of one half and two can be introduced here, as the child tears one paper in two)
Throwing	 Squeeze newspaper into balls and throw them into a wastebasket located at a distance.
Collage	 Outline a large picture on a piece of cardboard. Then cut out five-inch squares of coloured tissue paper, crumple them and paste them within the outline. Decorate the tree with coloured bits of paper.
Making mobiles	 Cut out two pictures of a fruit and stick them together at the border to form a bag. Keep 6 inches open for putting the papers inside. Ask children to tear old newspaper, crumple it and stuff it into this shape.
Closing and opening jars	§ Close and open jars with different sizes and types of lids. Also have lids which open in different directions.

Shelling	§ Give the children some peapods to shell. Take the children out to feed goats and pigs.
Puzzles	§ Use rubber puzzles as they offer resistance when the pieces are put into place.
Ringing and squeezing	§ Give the children a washcloth to wring or squeeze. A sponge can be used while washing dishes or taking a bath
Punching	§ Punch holes with a paper punch, slowly increasing the weight of the paper to increase the hand strength.
Balancing	§ Carry objects which are heavy or which are difficult to balance. For instance, carry one glass of water/books with two hands, one glass of water in one hand, or one glass of water in each hand and wal

Dressing the wound	§ The child is given a doctor set and a doll and then told that the doll has got hurt at a particular spot and he can use the bandage to do the dressing on that spot.
Transference	 § The child can transfer the water from a bucket with the help of a mug into a smaller bucket or glasses or different sized small bowls without spilling the water. § Pour "lentils" from one container to another. The smaller the container, the harder the task.

Aim: To teach the children advanced Arm - Hand activities

Activity	Method
Paper Folding	 § Fold paper, even though it may be very difficult at first .Fold the paper to make the marks. Then ask the children to fold again on the same marks. This helps them to understand the directions. Fold a large sheet of newsprint into a series of folds parallel to one another, fold the paper in two, and then fold in two again. Hold the paper with the non-dominant hand and make a mark 6 with the dominant

	 hand. Then unfold the paper and trace the folds with a thick pencil or crayon to reinforce the horizontal or vertical aspect of the line. Proceed to fold the paper lengthwise and crosswise so that there are both horizontal and perpendicular lines.
Tracing 3D objects	 Draw around the inside and outside of a shape of an object, holding the object with the non-dominant hand.

Fine Motor

Aim: To teach children coordination of fine motor movements

Activity	Method
Bending	 Give the children beads of different sizes and colours. Use a thick shoe lace or plastic cord for beading. Ask the children to bead according to various sequences of colours and sizes.

Clay moulding	 Give the children blocks of clay. Ask them to roll it, press it and make it into different shapes using their imagination.
Sand play	 Take sand in a tub. Hide an object in the sand and ask the child to find it.
Separating beans	 Mix 2-3 types of beans. Ask the children to separate them.
Targeting activities Darts, tailing donkey	 Give darts to the children to aim at the centre of the target. See who reaches closest to the target. § Draw a donkey without a tail on the black board. Blind fold each child and ask him to draw a tail for the donkey. At the end of the session, find out who reached the closest.
Writing patterns	 § Give the children rough papers for scribbling. § Draw a big picture on a sheet of paper and ask the child to colour within the outline. § Give the children worksheets on which dots are drawn. Ask them to join the dots to make a simple picture.

Sorting / Grouping	 § Give two types of fruits, vegetables, coloured blocks, shape cut outs, seeds, shells, grains, counters, etc. Ask the children to separate them into two baskets. § Slowly mix more than two types of objects and ask the children to sort them.
Block building	 § Give blocks of different sizes and ask the children to make towers in ascending and descending order. § Make different shapes using the blocks.
Buttoning	 § Give the children clothes with different sizes of buttons for buttoning. To start with, keep the cloth in front of the child and then go on to buttoning his own clothes. § Introduce buttons, hooks, zip, velcro, etc.
Lacing	 § Stick a big picture on a cardboard. Punch holes in the outline of the picture. Ask the children to lace through the holes using a shoelace or a thick nylon wire. § Encourage children to lace their own shoes.

Scrubbing with chalk /crayons	§ Give the children big sheets of paper and crayons/chalk. Ask them to scrub on the paper vigorously.
Browsing through books	§ Give picture books for the children to turn pages.
	Encourage them to see pictures from left to right.

Aim: To teach children fine motor movements.

Cutting with Scissors

Before cutting with scissors the child should have eye - hand co-ordination. Select plastic, paper cutting scissors that cut well and are appropriate for the right or left hand. A child with visual impairment should not be given scissors to cut.

Activity	Method
Cutting clay and cotton	§ Unlike paper, clay can be held in any position for
	cutting or, it does not have to be held at all. If
	necessary, the teacher's hand should help the child
	with releasing and closing movements of using the
	scissors. For variety, cut little chunks of cotton and
	paste them on the outline, or inside the outline,
	pictures of cloud, ducks etc. Make the child cut clay
	into small pieces holding the scissors in his/her

	hand.
Cutting paper bits	§ Children cut bits of paper at random and use it to make collages of vegetables, fruits, transport, trees.
<section-header></section-header>	 § Although a child can cut along a straight line with someone else holding the paper, he should begin to hold the paper in his non-dominant hand thus using both hands so that the scissors actually cut and do not just slide over the paper. Teach the child to hold the scissor and use it § At first, expect the child to cut along a short line, only two inches long, and then increase this length as the child improves. If the child is advanced in his use of a pencil or crayon, let him draw a straight line with a ruler and then cut along it or cut along a folded line § Provide tactile guidelines for a child with severe disability by mounting two strips of cardboard on a
	sheet of paper and having the child cut between them. With increased co-ordination, use only one piece of card board

Use of strips	 § Paste the ends of strips together to make ringlets. Surround a happy face with ringlets for hair or use white ringlets for grandfathers beard and hair. Paste white/black ringlets inside the outline of a sheep. Use green, white and orange ringlets for the Indian national flag. § Loop ringlets together for chains for decorating rooms and as necklaces and bracelets. Vary the colour to make a flower and use chain for arms and legs of large figures. § Straight lines with turns include geometrical figures, squares and triangles. Teach the child to hold the
	scissor in one hand and turn the paper with his other hand. Cut larger shapes before going on to smaller shapes.
Cutting curved lines and circles	§ Paper must be turned continuously when cutting curved lines and circles. Have the child start by cutting short, curved lines clearly drawn on paper. Next let him cut out large circles slowly making them smaller.
Arranging circles according to sizes	§ Arrange circles according to sizes on top of each other or arranging them in ascending or descending

	order across a sheet of coloured paper.
Making a caterpillar	§ Overlap numerous green circles of same size to make a large caterpillar with a face and feelers drawn on first circle.
Making a cap	§ Making a teepee (or a cone effect) by slitting a circle to the centre and then overlapping the cut edges paste them together thus making a cap.
Designing a greeting card	§ Design a greeting card with circles cut from wallpaper.
Cutting combinations of shape	§ Cut out combinations of the forms with which the child has already been working eg: circles, squares, triangles and rectangles.
Cutting easy figures	 While cutting out a pictured object the child may have trouble deciding which line to cut using the scissors. Therefore introduce these aids:- Colour the outline of the object. Run the child's finger around the outline before he starts to cut. Colour the figure so that it will be easier to recognize

	the whole form.
Cutting variations:	§ Make random designs with the pieces of strings/
Cut string and yarn	yarn, or paste them along the outline of a figure.

Directionality

Aim; To teach the child the concept of left, right, up, down etc.

Activity	Method
Walking, riding on transport	§ When riding in a toy bus, tricycle, car or walking with the child ask 'In which direction do we turn to get to where we are going?' The child eagerly accepts this game because he likes to know what to see and where to go.
Drawing lines on black boards/ slates	§ With the child facing the black board direct him to draw a line to the right, up, down etc. varying the directions. Use one hand first then the other, then both hands increasing the speed of the directions as the child learns.

Identifying body parts/objects § Have a child give	§ Instruct 'touch your left foot with your right hand', 'touch your nose with your left hand'.
Position of clothing	§ Have a child describe the exact place of a piece of clothing on another student e.g. the child should tell the shirt is worn on top and the pant is worn below.
Finding the object	§ Have the students close their eyes, and place an object within sight in the classroom. Then let them compete to see who describes the objects exact location.

Auditory Discrimination

Aim: To teach the child to differentiate between sounds

Activity	Method
Blind Folding	§ Have a blindfolded child identify the individual voices of his classmates, which musical instrument is being played, a tin box with pebbles can be used to produce sounds, whether the eraser or lead-end of the pencil is tapping a table from where they are being played.
Rhyming words	§ Have the child identify rhyming words.
<section-header><section-header></section-header></section-header>	 § Talk about different sounds made by different things like "drip-drip" of the water, "chuk-chuk" train, whistle of the train, "tick- tick" of the clock, 'tab- tab' of the hammer etc. Close the child's eyes, Make the sound and ask the child what sound is it. § Make the sound from different corners and ask the child from where it is coming.

Raju says	§ Play the game 'Raju says'. The children have to listen carefully and do the actions that are given by Raju eg- Raju says clap your hands .If the instructions are given without the word Raju they don't have to do the action eg-Clap your hands instead of Raju says Clap your hands.
Imitation: Have the child imitate sounds	§ Have the child imitate sounds (include syllable combinations that are of words). Collect pictures of objects to be identified with words eg. B says 'ba', B for bat. Many of these pictures are available from speech therapists. Have the child distinguish between sounds that are similar.

Auditory Memory and Sequencing

Aim: To teach the child to sequence, listen and remember Auditory Inputs

Activity	Method
Clapping and copying music patterns	§ Have the child listen to the beat of a tom-tom or drum. Then copy the pattern by clapping or hitting on a table.
Auditory comprehension	§ Read a simple sentence "The big brown dog had a very small bone". Then ask, "What did the dog have?" What colour was the dog?" Slowly increase the number of sentences.
Recitation	§ Have the child recall nursery rhymes and then simple poetry.
Follow directions	§ Have the child recall and then follow verbal, directions. Increase the number of directions as the child learns.

Relating pictures to true stories	§ As the child listens to a story that is told, read or recorded, have him use the flannel board to illustrate what he hears.
<section-header></section-header>	§ Tap the table with a stick or similar object, instructing, "listen, watch and count out loud while I tap on the table." Listening is reinforced by the seeing and the speaking. Ask, "How many times was the table tapped? Next, take away the visual reinforcement. Instruct, "Close your eyes and count out loud while you tap the table". When identification is mastered by the combination of speech and listening, omit speech and ask for recognition while the child watches and listen only. Use all the above steps while, beating a drum, tapping a glass with a spoon.
Repetition and Sequencing	§ Speak letters, words or numbers in sequential order, asking the child to repeat when you finish the sequence. Next, after stating a sequence, restate it, leaving out a unit, Ask, "What did I leave out", Next, restate a sequence, adding a unit. Ask, "What did I add? Finally, ask the child to repeat a sequence in reverse.

Visual Discrimination

Aim: To teach a child to identify visual differences

Activity	Method
Find the shape	§ Provide printed exercises in which the child finds like objects (such as circles) that are a part of a total picture.
Find the hidden object	§ Provide printed exercises in which the child finds "hidden objects" in a picture.
Shadow matching	§ Have the child match shadow of an object to the actual picture of that object.

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Sorting	§ Using different utensils, leaves, stones, buttons, the children are asked to group the objects according to size, length and shape.
Spot the differences	§ Use "What's missing pictures" that require careful observation of details, e.g. a picture of a child may show that he is ready to play in the mud, but has forgotten to put on one sock and shoe.
	§ Convey some idea of the measurements of objects. Exhibit 2 or more objects of different sizes eg boxes, bottles, toy animals, pencils or apples and ask the children to compare them in size. Sometimes use 2 objects of identical size.

	§ Place two piles of stones in front of the child. Ask which one is larger. Then ask the child to close his eyes. Remove some stones from one pile and ask him if he can spot any difference after opening his eyes. This game can be started with making the difference very noticeable and then the difference can be reduced.		
Imitation	§ Have the child imitate movement patterns made by the teacher.		

Visual Memory and Sequencing

Aim: To learn to see and remember and sequence visual inputs	Aim:	То	learn	to	see	and	remember	and	sequence	visual	inputs
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Activity	Method
Sequencing	§ The children can be told to arrange each group of sorted
	objects like utensils in a particular order: from the tallest to the shortest or big to small.

Memory Game





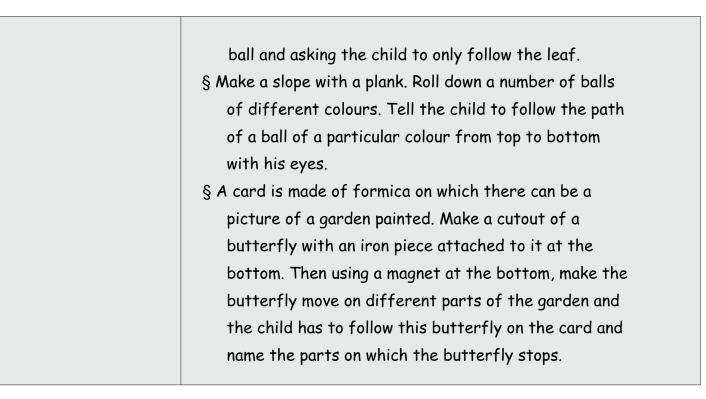
- § Ask the children to survey the teacher or another student. Have that person leave the room and add or subtract an article of clothing, or change his attire in some way. Give a prize to the first child who notices what has changed.
 - .§ Provide a memory game consisting of sets of matching pictures. After a series of the pictures is turned face down, have the child recall where he saw a picture and then have him put the matching picture with it.
 - § Hold up one picture. Take it away and then show the child several pictures. Ask, "Which one have you just seen? At first, there should be gross differences in the pictures (boy, girl, man). As the child learns, the differences can be more subtle (all boys). Have the children look around the room. Then say, "Now close your eyes and tell me what you saw".
 - § Put a gradually increasing number of objects on a tray§ Take the tray away and ask the child to name the objects.
 - § Remove an object, and ask for the name of the one that is missing.
 - \$ Add an object and ask for the name of the addition.
 - § Have one student look around the room to see who is present. Then have him close his eyes, while one student leaves. Can he name who has left?

Recall daily activities	§ Stimulate the child's visual recall by asking, "What did you eat for lunch?" Or "What colour sari did your mother wear today?"
Copying patterns	§ Help the child to transpose visual patterns such as,, , ,etc.
Tracing Image: Constraint of the second se	§ Make a shadow on the black board of different toys or objects or dolls and the child can draw the outline of the object with the chalk

Visual Tracking

Aim: To teach the child to track the movement of objects with eyes.

Activity	Method
To follow movement of objects.	§ A leaf can be thrown in the air and the child is asked to follow it as it falls down to the floor with his eyes or head movement. It can be increased in difficulty by throwing two more things like a feather and a small



Language

NOTE: The language related to the children within the classroom is both Hindi and English. Words are slowly and steadily introduced in "English" giving them its meaning in Hindi.

- 1. As the children enter school, the teacher introduces herself either as teacher or didi.
- 2. Games like ring'a ring'a roses; outdoor games like swings, slides and toys are given, so that the children become accustomed to the surrounding.
- 3. Each child is asked to introduce himself/herself thus developing a rapport between teacher and child.
- 4. Scribbling on sheets of paper stuck on the floor, thus making the child feel at ease with his/her environment and feel articles which he/she will be using.
- 5. Each day the child is given a sweet as he/she leaves thus encouraging the child to come to school the next day. Sweet giving is then later weaned out, slowly but steadily.
- 6. Cleanliness is taken care of by discussing with the children their daily routine and thus improving on the same.
- 7. Child is educated through pictures, actions, random things/toys around the class, on cleanliness.
- 8. Parents are taught too. Teacher inquires if the parent is unable to follow the same.
- 9. A lot of colouring is given to the children. Pictures are drawn and the children are asked to colour but not expecting the child to colour within the respective picture.
- 10. Scribbling/colouring/playing with paint/clay/outdoor games/playing in sand pit/toys doll corners are all made available to the children as per their choice. (Thus bringing the child in closeness to his $2\frac{1}{2}$ hour environment.)
- 11. **Children are taught to speak in a full sentence to communicate their needs, and to comprehend simple commands . e.g. "What is this? This is a bag."

^{*} Based on findings of the ecological inventory

Story Telling:

The story is narrated in Hindi with certain `common' words in English.

Aim : -

Story Telling brings about ways of learning new words; speaking and understanding them. Helps the child to develop his/her listening and concentration power. It also helps the child to imagine, reason and think. The child through stories relates himself/herself with the characters. The use of aids (teaching) helps the child to develop his/her perception and relate and coordinate with the story-teller.

Stories	Aids	Objectives
Thirsty crow	Charts, flannel board, drama with the help of pebbles, puppet, a jar of water, songs.	Brings about language development introducing words such as water jar, crow, and also aiming to show how clever one should be.
Fox and the Grapes.	Charts; flannel board, actions like jumping, cut outs, grapes, sound of a fox.	Words like grapes, jumping fox. Aiming at trying and not giving up, with consistent effort.

Dog and the Bone	Drama (make the kids enact), charts cut outs, bones, sound of a dog.	Words like dog, water, bone, jungle. Thus aiming through that one cutout to teach that one should not be greedy. Should not desire/rob anything which belongs to others but to ask for what is needed 'please' (use of the word is taught).
*Sheikh Chilli	Role-play, flash cards, branch of a tree, axe.	Vocabulary and language development, wood, tree, branches, axes, wood cutter. The message :listen to others
*Bhopla and Nanima	Drama, charts, 3D aids, music songs, pumpkin.	Vocabulary and language development, pumpkin, jingles, granddaughter, lion, grandmother, fox , tiger. Brain is better than brawn

 The Clever Monkey Pictures cards, storybooks, charts, toy /puppet of a monkey and a Crocodile. Vocabulary and language development, river, monkey, crocodile, black, heart, wife, swimming. Importance of presence of mind Method - The teacher uses story cards, charts, puppets and tells the story progresses The same story is repeated by making the children enact the character the story using actual 3D's and masks. 	*Two Friends	Drama, actions, toy of bear.	picture cards, soft	Vocabulary and language development , Bear friends, forest, tree, smell, climbing. A friend in need is a friend indeed.
to the children, shows them the pictures cards as the story progresses The same story is repeated by making the children enact the character		toy /puppet of a		river, monkey, crocodile, black, heart, wife, swimming. Importance of presence

At the PMGP site after the story of 'Bhopla and Nanima' was narrated, the children were given characters from the story to enact. Ramu was made the tiger, Raju was made the fox, Pinky was made the bear, Sheela and Reena were the grandmother and grand daughter and the mobile of the pumpkin made by the children was also used as a teaching aid.

^{*} Based on findings of the ecological inventory

Oral Language

Aim: To develop language skills and to introduce different concepts

Торіс	Aids	Objective	Method
My Family	 Puppets (finger) Conversation (casual) Charts Stories on happy family 	The child learns new words like: • Father/papa • Mother/mummy • Brother • Sister • Grandmother • Grand father • Uncle, aunty	Through conversation, different family members, father, mother, brother and sister are discussed. This topic helps the child to still be in closeness with his home inspite of him/her being away at a nursery class. Involve the children in role-play to act as mummy/daddy etc.
	ific child does not have par child feel at ease with his p		cuss grandmother and grandfather,
Parts of the body head, face, hands, legs, ears, etc	 Actions Outline of body on the floor with a chalk and making the child lie on the floor. 	 Words in English are learnt. When cleanliness is orally discussed, the child learns and understands better the need for cleanliness of his body. 	Make the children point to their own body parts. Show the parts of the body using dolls. Make puzzles, make them make rhymes with actions of the body parts.

	 Different actions with body parts. Clapping/stamping etc. 					
Clothes	 Pictures of clothes Actual clothes like shirt, pant, frock, saree, dupatta etc Clothes worn in different seasons 	 Children learn English words Clothes worn by men and women 	Ask the child what clothes he/she wears, his/her mother/father wears. Ask them to point out to pictures of these. Bring clothes they wear in different seasons. Teach them about the clothes worn and why. e.g. raincoat in the rainy season because we get wet, sweater in winters because we feel cold. Teach about the different seasons during those seasons			
Children of Jawahar Nagar site were taught rhymes and songs on the rainy season. The teacher brought an umbrella and raincoat to show the children the clothes worn in the monsoons.						

Cleanliness	 Charts (washing hands, soap, toothbrush, toothpaste, taking a bath, etc.) Drama (enacting imaginarily with bucket; toy soap, toy tap etc.) 	*Here the child learns through a chart what exactly cleanliness means and what are the things we require e.g. water, soap, towel, washing bath, mug, bucket and where to wash clothes- mori, outside the home etc.*	Make the children enact actions of bathing, brushing,combing,etc. Teach the children to wash their hands before and after meals/ break.Children are made to stand in a queue to wash their hands. Hands should be washed after going to the <u>toilet</u> too. The children are asked to wipe their legs before entering the classroom. Clean clothes and handkerchiefs to be worn. This should be repeatedly told both to the child as well as his/her parent.
<section-header></section-header>	Charts (broom, washing hands, rag, dustbin, soap, towel etc.)	Introduction of the ancillary staff is a must. Conversation on what the child has been observing during his few days at school. Proper table manners; or if on the floor then the child learns how to sit with crossed legs while eating. No spilling, and if spilt then no picking and eating.	Involve the children in classroom maintenance. Ask the children to keep the toys back in their places after playing with them. Teach them songs on cleanliness like "bits of paper" and teach them to throw spilt food and paper in the dustbin.

Transport	 Charts Jigsaw puzzles Toys of car aeroplane, train, etc. 	 Helps the child to observe his surrounding. *Learns new words like car, plane, truck, rickshaw, tempo, scooter, taxi, cycle, motorcycle etc. Relates his observation thus learns to express himself. Develops his power of perception and thinking, thus reasoning what sounds relate to which vehicle. 	 Conversation on means of transport "How I come to school" "What I see on the road as I go out". Sounds of specific transport. Show the children the different types of transport moving on the road from the window. Give them the toys of bus, train, etc. to play. Ask them to name, point, show the vehicles from the pictures.
	-	asked to bring their rain coats t. They were used as props wi	s and their umbrellas for the sessions, th rhymes on rainy season.
Festivals	 Charts with pictures Celebration of festivals in the class 	Children to learn about	Celebrate each and every festival as it comes. Make collages related to the festivals and talk about them. Independence day celebrated in Jawahar Nagar anganwadi

		the different religions and festivals celebrated in the community	
performed after the story of Ram	which the teacher lit fire	crackers and distributed swee	essed in new clothes. A small pooja was ets. Before the party, the teacher told up a related chart made by the children
Things found in the home	 Pictures of things found in the home- sofa, rack, chair, cupboard, tub, bucket, drum, bags, bottles, cans, tap, toys of all the objects above. 	 To teach the children the English names of the objects found at home 	Talk to the children about the things they see in the house / kitchen. Give them toys to play. Involve them in doll play, kitchen play, etc.

People who help us	 Pictures of people who help us teacher, driver, shop owners, tailors, carpenters, electrician, construction workers Things they use (carpenter set, doctor set, etc.) 	 To teach children how these people in the community help us, with the use of who, what, where. 	Ask the children whom do you go to when you are sick. Introduce the children to pictures of doctors, carpenters, show pictures to them, talk about their importance, the things they use like a doctor set. Involve them in role play. Play doctor.
Action words	 Through actions and yoga as the day begins for a period of 10 minutes. 	Helps the child to develop his listening skills co-relating it to his actions as the teacher commands. Develops auditory, visual, perceptual skills. Helps in gross motor development.	Involve the children in daily actions of Up/down Sit/stand Clap, jump Sleep
Action words like clap, sit, stand, sleep were taught in the class by making the children do the action. When the children were taken into the playground for outdoor play the learning did not stop. All action words like up, down, jump, run, sit, stand were consolidated while the children went up and down on swings and slides and played games in the garden.			
Shapes Circles,Squares, Triangles	Cut outs Charts Toys etc.	Develops perception, recalling ability and speech, as well as fine motor development as	Give the children objects of different shapes and ask them to sort out.

	Black board for drawing Utensils that are round Bindis	the child is taught to draw the shapes.	Ask the children to draw pictures with different shapes.
Matching pictures	Black board, chalk, cut outs, drawing on paper, actual objects	Helps the child learn the concept of same/different. Develop perception, concentration and memory skills.	First make the child match object to object like a spoon to a spoon. Then make him match the picture to the object. Give the children pictures of different fruits, vegetables, things etc. Ask them to match. The same can be given on worksheet.
 Our senses Nose for smelling Eyes to see Tongue to taste. Skin to touch and feel Ears to hear 	 Self, actions, soaps, perfumes, sugar, lime, sharp, rough surface for touch, sounds of different objects eg. Pebbles in a box, pins in a box, etc. 	This helps the child to become aware of self and body parts. Develops a sense of belonging of himself/herself	Make the child experience through all senses. Give him a soap to smell and tell what it is. Give him/ her sugar to taste, a blunt object to touch

Me and my Friends	 Require child's photo. Make the child stick it on the flower or any object made by him with his peers and display it. 	a friendliness and belonging towards peers and oneness within the classroom.	Talk to the child about his friends in class, at home, who are his friends, what do they do together, what games do they play.
Common: Fruits Vegetables Animals (wild/ domestic)	 Charts Posters Cut outs Jigsaws A trip to the bazaar, zoo or places where stuffed animals are on display like Kamala Mehta School for the blind. 	Develops the child's awareness to the surrounding and what he is consuming. Thus developing sense of taste too. *Animals	Show the children actual fruits and vegetables to identify. They should be made to feel and touch the fruits, vegetables and stuffed animals. Teach them their names, colours, how they are grown, how they are eaten raw/ cooked, without peeling or after peeling, after washing, etc. Show them pictures to identify and match. Take them to the market. Role-play of vendors.

|--|

In an anganwadi, the teacher asked each child to bring a tomato. In the class she discussed red colour, round shape, taste, seeds and smooth surface and softness of the vegetable in the same session. Thus she consolidated all concepts using a 3 D object.

Teaching aids for language





Creative Activities

Aim: - To use creative activities to consolidate concept learning.

Activity	Method
Sand Painting	§ Give children sand to stick in a given outline like square. § Aids: - Sand, fevicol, worksheet.
Finger Painting (Palm, nail painting)	§ Give the children different poster colours in the plastic bowls or plates and ask the children to dip their finger/palm in the paint and stamp on the given picture worksheet.
Vegetable Printing	§ Mix the poster colour, take the vegetable (ladyfinger or onion) and cut the vegetable: Ask the children to dip the vegetables in the colour and stamp it on the given picture or drawn outline.

Paper tearing and pasting (Collage Making)	§ Ask the children to tear newspaper or coloured paper and give them the drawn worksheet or chart to stick on it to make a scenery.	
Origami / paper folding	§ Give the child a paper to fold and fold it into a bird or any other object, animal, etc.	
Spray Painting with tooth brush	§ Take a toothbrush, dip in colour and spray it on the paper with different colours.	
Magic Painting	§ Draw a picture or shape on the paper with white or coloured crayons, and paint with black watercolour and painting brush.	
Marble Painting	§ Take a water tub with water. Add oil paint in it and mix it with a stick and then ask the children to dip the plain paper. Dry the the paper and display it in class.	
Craft with ice cream sticks	§ Draw a design on a worksheet and stick ice cream sticks and make a home or wall hanging, cap, etc.	

Roller pin painting	§ Give the children poster colour. Mix it in one plate. Tie a thread around a rolling pin and ask the children to roll the rolling pin on the paper.
Palm Painting	§ Ask the children to dip their palm and stamp on the paper and make different designs/shapes on palm imprint like peacock, chick, etc.
Thread Painting	§ Ask the children to dip the thread in the plate of poster colour and ask them to stamp on the paper. You can also give different colours to dip and stamp.
Sponge Painting	§ Cut the sponge in any shape - circle, square or triangle. Ask the children to dip it in colour and stamp it on the paper.

Blow Painting	§ Give the children plastic straw. Ask them to put some mixed water colour on the paper blow with a straw.
Cotton Painting	§ Take the cotton and ask the children to dip in the poster colour which is already mixed with water and stamp it on the paper. Ask the child to stamp using different poster colours. To make a good colourful design.
Paper crushing and Painting	§ Crush the paper. Dip in the poster colour and print on the worksheet.
Leaf Painting	§ Dip the leaf in the colour and print. It will give a leaf impression.
Spray Painting	§ Dip a toothbrush it in a tub with colour. Take the toothbrush and spray the colour with the thumb on the worksheet.

Creative activities were used to teach concepts e.g. when the colour red was taught a collage of an apple was made in class which involved red paper tearing and sticking within given lines.

Music & Movement

Торіс	Aids	Objective	Method
Music Children are encouraged to hum the tune of various nursery rhymes and recite.	 Chart, actions puppet and musical instruments. Tape recorder. 	This helps the child develop his vocabulary. Actions help the child relate his speech/ vocabulary to his actions thus bringing about co-ordination; imagination and perception too is developed	 Play the tape in the class. When the teacher sings the song using actions and puppets, toys, the children are encouraged to join in as they learn the songs and do the actions. Children doing actions of the song "Put your right hand in, put your right hand in, put your right hand out"
			<u>NOTE</u> : Hindi rhymes are first introduced then followed by English rhymes.

Rhymes

- Jack and Jill
- Bits of paper
- ABC
- Teddy bear
- Two little dicky birds
- Put your right hand in, Put your right hand out
- Chubby cheeks
- Hickory Dickory Dock
- Macheli Jal Ki Rani
- Dhobi Aya
- Baa Baa Black Sheep etc.
- *Aaloo ke chaloo Bete Kaha Gaye the
- *Sasa sasa Disto Kasa
- Aakad Bakad Bombay Bo
- *Meethu Meethu tota
- *Gadi aaya Gadi aaye
- *Bili bolee Miyaw





Pre-Reading/ Number/Writing

Pre-Reading /Pre-number Work

Concepts	Teaching Method	Aids
Learning about shapes Free contract of the second	 Matching 2D objects Tracing with fingers and then pencil in air Drawing outline with fingers and then pencil Sticking sand, in the outline, on the outline Cutting & Sticking Painting & Colouring Identifying the shape in picture using cutouts and objects Recognize the shape in day to day objects 	 Shape sorter Basic shapes, Peg Board Plastic shapes Shape puzzle Day to day objects e.g. Plate, bangle, coins Wooden/ sand paper cutouts.
Learning about colours § Red, Blue, Green, Yellow	 Recognize, identify, label Recognize the colour in the environment or know the appropriate colour for different objects 	 Blocks Beads Magnetic board with buttons

	 Matching and sorting (Blocks, Beads) Colouring, Painting Identification of colour of familiar object e.g. school bag, toys in the classroom Ask all the children to wear a particular colour on one day and talk about the colour code. Hiding objects in sand and finding them Matching colour cards 	 Peg board Colour matching cube Toys in classroom *Shells *Bangles *Match boxes *Bindis *Clothes *Tiffin boxes *Chalk *Coloured paper* 		
In Bandra anganwadi, when the children were taught green colour, they were taken to the garden to show them the trees, grass and leaves that were green in nature. They were asked to bring fruits like banana or wear green clothes to teach the colour green. During the creativity session, the children made collages of leaf imprinting, and vegetable painting using a ladyfinger.				
Learning the Concept of Same / Different Matching / Sorting	 Name objects seen in class e.g. pencils, spoons, books, chalks, crayon etc. Ask the child to match the same objects e.g. match a pencil with a pencil. 	 Blocks according to colour size,shape Objects and utensils like glasses and bowls, clothes, picture cards 		

* Taken from results of Ecological Inventory.

	 They can be asked to sort the same objects in one tray e.g. all red chalks in one tray Use different picture cards for matching and sorting. Worksheets for matching same objects 	 Letter board 3 D, 2 D Sorting according to category colour, shapes, animals, fruits, transport
<section-header><section-header></section-header></section-header>	 Using familiar objects (big plate & small plate) to show comparison Mother Baby Animals Stacking rings according to sizes Outlining objects of different size Comparing objects in class - ask the child to show or point to big object or small object Colour the big or small object 	<text></text>

Learning the concept of more/less	 Water play Sand play These are taught through tumblers, glasses, bowls, cups where the children experience the quantity by filling them. 	 Tumblers Glasses Bowls Cups 		
Learning about Puzzles	 Initially the children are given a one piece puzzle. The children are trained to observe the shape of the puzzle before fixing it. Then the pieces of the puzzle are increased from 2-4-6. 	 Cardboard cutouts of pictures 		

Learning about colours



Aim: Teaching numbers

Before you begin to teach numbers, the children should know the concepts of big/ small, same/ different, shapes and sizes.

Activities:

- 1. Rote learning of numbers,
- 2. Number recognition and labeling,
- 3. Number values and
- 4. Number writing.

Also remember to teach one number at a time. When the child can recognize and label, know number values and write a number, only then teach the next number.

Activity: Rote learnings:

Children should be able to say the numbers orally from 1-10.

Method: A number line should be put up on the blackboard. You should point to the numbers on the number line and the children should say aloud the numbers everyday in the morning. This will also teach them number sequence and what comes after.

Teaching aid:

Number line

1	2 3	4	5	6	7	8	9
---	-----	---	---	---	---	---	---

Remember:

- 1. The numbers should be clearly written
- 2. They should be approximately of the same size
- 3. They should be large enough to be visible clearly to the child in the last row

Activity: Number Recognition and labeling

Method: The child is able to recognize/ say what number it is when you ask him. He should also be able to show the number.

For example,

What number is this?

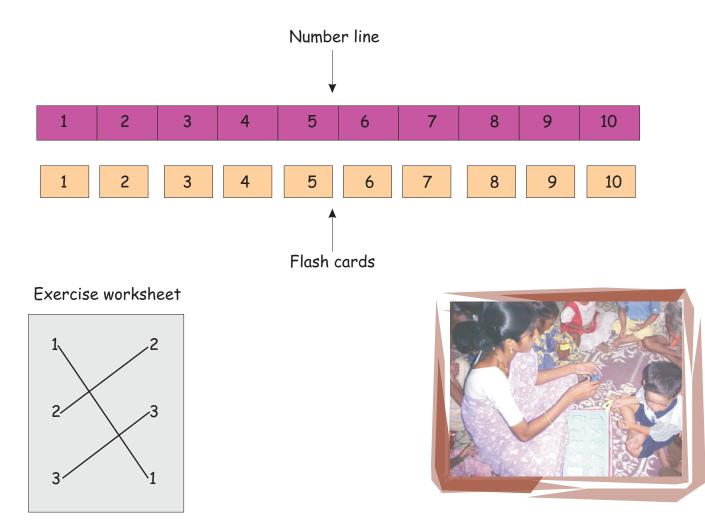
2	
---	--

Show me number 2.





You have to use the number line or flashcards to ask the children to show the number or say what number it is. Children can also be asked to match the flash card numbers with the number line for recognition and labeling. Teaching aid:



Activity: Number Values

Method: After recognition and labeling, you must teach the children the value of numbers.

- Teach children one number at a time.
- To teach values, always give examples of things that they see around them that represent the same value. For example, If you are introducing number 1, tell them/ show them pictures of one sun, one moon, one mouth, one nose.
- After they have understood it then give them familiar things to count like their own tiffin box, water bottle, toys etc. You can use things like stones, shells, bottle caps, leaves etc.



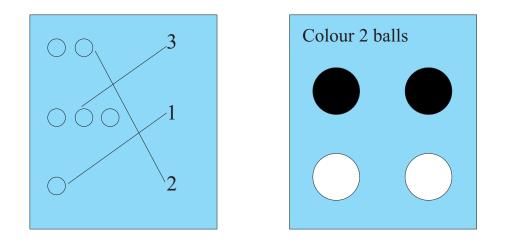
To make sure that the child has understood the concept, you can also ask in different ways I like give me one stone, take one stone from your friend, throw one ball in the basket etc.

Teaching aids:

1. Flashcards with pictures



- 2. Number book: This is a book, which has pictures on one side and number on the other side of the page. You can make a book of number 1, number 2, number 3 etc. It contains pictures of objects, which are of absolute value.
- 3. Charts of the number and corresponding number of things. The drawing should be of something that the child is familiar with.
- 4. 3- D aids: Bottle caps, counters, shells, pebbles, pencils, crayons etc.
- 5. Exercise worksheet

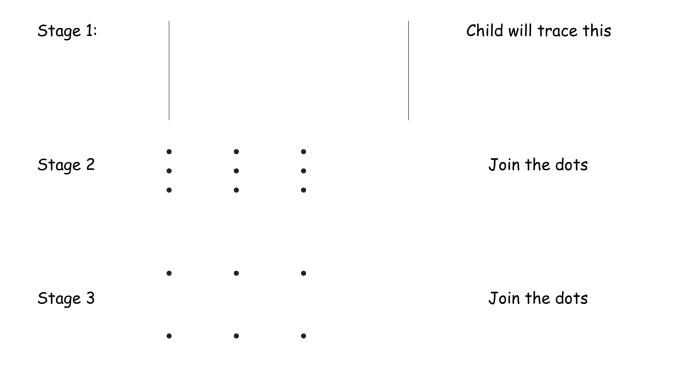


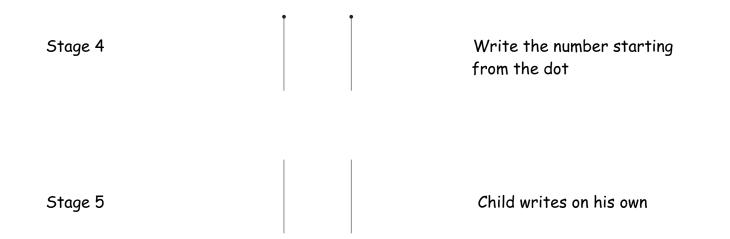
Activity: Number writing

Method: Every number that you teach the child, must be followed by writing it. Writing should be taught in different stages.

-Always begin with dotted lines for children to trace and then, gradually reduce the number of dots to be traced. -Tell the child to write on his own.

Teaching aids:





You have to use these stages for all the numbers that you teach. Once the child knows one number then teach the next number. Next step would be to mix the numbers in the exercise that you give using flashcards and worksheets.

As you teach them the numbers one by one, also teach them the sequence of numbers and what comes after. You can do this with a number line and flashcards. Give the children flashcards to be arranged in a sequence according to the number line.

Number Teaching Aids



Aim: Teaching Alphabet

Alphabet are to be taught using the phonetic method. This means you need to teach the child the alphabet according to the sound of the letters. E. g. Bb makes the sound bbbb. You must remember the rule of teaching one letter at a time. While teaching alphabet you must make sure that the child learns to

- 1. Label and recognize the alphabet (big and small) and the sound of the alphabet.
- 2. Identify the objects that begin with the letters of the alphabet.
- 3. Write the alphabet (big and small)

Activity: Label and recognize the letter and its sound

This means that the child should be able to show the letter or tell the name of the letter when asked.

Method: Repeat the letter again and again till the child can fully recognize it. You can show two flashcards of different letters and ask the child to recognize the letter or the sound from these two. E.g.



You can ask the child after showing the above letters:

- 1. Show me b
- 2. Show me the letter that makes the sound bbb
- 3. What sound does the letter b make?
- 4. What is this (point to the letter)?



Teaching aids:

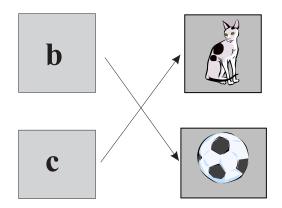
Activity: Identify the objects that begin with the sound of the letter: Teach the children which object names begin with the sound of that letter.

Method: Remember

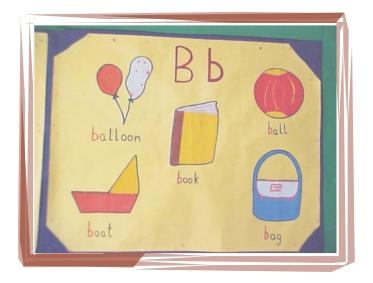
- ✓ Teach them pure sounding names. E.g. if you teach 'Gg,' tell them that G makes the sound gggg and the name of the object which begins with G like Goat, Gum etc.
- ✓ Don't use blending sounds e.g. Glass
- ✓ You can use flashcards for teaching this. Children can be asked to match flashcards with pictures of the objects with alphabet cards. This can also be given as different types of exercises on paper (worksheets)

Teaching aids:

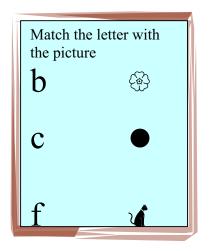
1. Flashcards to match

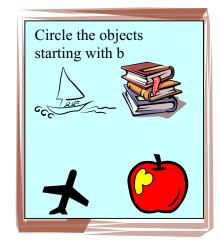


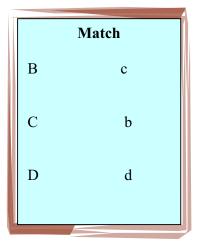
2. Chart of the above



3. Worksheets



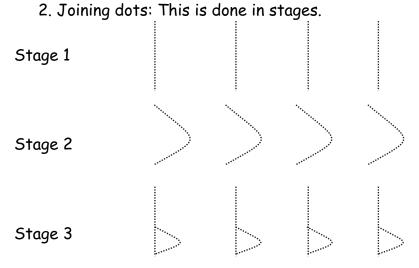




Activity: Writing alphabet

Method: To teach the child to write you have to use the same method as you do for numbers. Two methods for teaching writing are:

1. Tracing the alphabet: Give the children cut outs of the alphabet and make them trace the letter with their finger.



Once the child learns one letter, then introduce the next letter using the same method. You can mix the letters and give exercises with flashcards and worksheets.



Play

Play is important because it helps the overall development of the child in areas of physical, emotional, social, cognitive and educational growth of the child. It is important but often neglected. Play should not be considered as a time where children are left alone to enable adults to do more important things. It should never reflect on a child that playtime is time to get him out of the way. Play is not the opposite of work as wrongly thought of, it is actually work that is lot of fun and stimulating if handled and guided correctly. All concepts learnt in class can be consolidated through play.

Play has a definite purpose; it helps a child develop valuable skills such as:

- Imagination and creativity
- Abstract thinking
- Empathy and the ability to cooperate
- Social, language and mental skills
- Learning to solve problems
- Confidence and self-esteem

Children should be encouraged to participate in different types of play like outdoor play, indoor play, water play, sand play and role play.

Dramatics





Drama can be used to enhance and consolidate moral values and language concepts learnt in class, making learning an enjoyable process. Children can be made to enact different emotions and feelings like sad and happy. Stories done in the classroom can be enacted. Each child should be given a character to play. Masks, teaching aids and actions should be used to get the feel of the character. Simple stories from Amar Chitra Katha, Ramayana & Bal Vikas Stories can also be enacted.

Yoga & Prayers

The first activity at the beginning of the session is prayer and yoga. Children are asked to sit with crossed legs and with their hands joined together or placed on their lap. A simple prayer is said in Hindi, Englishand also in the language that is used in the community. E.g. Kannada, Marathi or Urdu. This is followed by simple relaxation exercises like breathing in and breathing out.Children are also asked to sit quietly with eyes closed for 2 3 minutes.



In PMGP colony, a short prayer session was held in Hindi, English and Kannada while in Jawahar Nagar it was held in Hindi.

Ethics

The child has to be taught ethics and the moral values of love, discipline, obedience, good habits and respect for elders to build up personality and to make him/her a better person. Teach the child to use words like thank you, sorry, please, good morning, good afternoon during the class as and when the need arises. It is very important that the teacher, and all adults dealing with the children, use and apply the same values. e.g. the teacher greets all the children every morning with good morning and children respond in the same way. To consolidate these values children can be told stories with morals using puppets and picture charts.

Sports

Sport activities like drill, march past, relays are very important in the overall development of the child. Children

also enjoy playing. Children learn decision-making and taking turns, following rules, accept winning and losing through games. They also learn team spirit and sportsmanship. A disabled child can also be included in the games according to his ability. e.g. if the children are playing kabadi and the child is not participating in the activity he can be the referee. In cricket, a child on the wheelchair can also participate by batting, sitting on the wheelchair or sitting on the ground. He can also be made an umpire. Children can be trained for march past, relays, lemon and spoon race, book balancing etc.



The children of the sites which did not have the play equipments were brought to the Bandra and Karuna Sadan centre. Transport was arranged for them. Parents and siblings volunteered to help the teachers during playtime.

Sources

- ✓ The Spastics Society of India Syllabus.
- Cruickshank, William, (1977), Auditory perception of speech: An introduction to principles and problems, Prentice Hall, London.
- Cruickshank, William, (1977) Learning disabilities in Home, School and Community, Syracuse University Press, New york
- ✓ Kephart, William; (1967), Doors of Perception, Virgin Books, London.
- ✓ Eye Hand Coordination Boosters: Abook of 92 Blackline Masters by Jay Lev.
- ✓ Kephart, Newell (1968), Learning Disability, Kappa Delta.

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List of Manuals

Policy: how to develop and implement inclusive education

- 1. Policy makers at National and State level
- 2. Policy implementers at local and community level

Community: How to create an inclusive community

- 3. How to open an inclusive nursery or anganwadi
- 4. How to open a Mahila Mandal (self help group)
- 5. How to sensitize the community
- 6. How to work with parents in partnership

Education: How to plan an inclusive programme

- 7. How to carry out an Ecological Inventory
- 8. How to design an Ecologically-enriched Curriculum
- 9. How to plan an inclusive curriculum
- 10. How to build community resources
- 11. How to provide opportunities for play

Training:

12. How to train Anganwadi Multipurpose Workers (AMW)

Meeting individual needs:

13. How to develop aids and appliances

14. How to work on improving health and nutrition

How to plan an inclusive classroom:

- 15. How to identify children with disability
- 16. How to include children with disability

Including children with...

- a. Multiple Disabilities
- b. ADHD
- c. Epilepsy
- d. Autism
- e. Visual impairment
- f. Speech, Language and Communication
- g. Intellectual impairment



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