

PHYSICAL DEVELOPMENT IN CHILDREN BETWEEN 0-5

Lecture No. 1

Why is it important to know the various stages of physical development in children?

- Every child as he/she grows up, goes through certain phases at a particular time during development. Though the development varies from child to child, knowing the various development phases helps anganwadi workers to identify differences in development as early as possible.
- Early intervention enhances the development process in children.
- Knowing about the various gross and fine motor development of all children can help anganwadi workers to easily identify any delays and send the child for early interventional services.

What are some of the important principles on motor development you can keep in mind?

- Development starts from birth and goes on till the child becomes an adult.
- It progresses from the head, i.e. head control comes before he comes up on his hands and then he crawls / creeps and then comes to sit. Finally comes up to stand and walk.
- Though the sequence remains the same in all children, the rate at which development takes place varies from child to child.
- Every child first achieves
 - Gross motor functions i.e. Able to come up to sit, come up on all fours, use hands to balance in sitting position, etc.
 - After which fine motor control comes into play, which is picking up small things from the floor, beading, holding pens and pencils, etc.
- Every baby moves about in a particular way without control initially, but later on control comes into play due to which movement takes place with balance.

How do can you identify a delay in the physical development of a child?

- Here is a simple checklist based on the various stages of physical development discussed earlier. This would provide you with an approximate evaluation of the degree of delay in development.
- The questions present on the checklist would be asked to the parent concerned and the responses should be recorded.
- In question 1-13, if more “yes” responses than “no” responses are acquired then the degree of delay is more and the child would have to be referred to a physiotherapist where assessment and therapy maybe required.
- In questions 14-19, if more “ no” responses than “yes” responses are acquired then the degree of delay is more and the child would have to be referred to a physiotherapist where assessment and therapy maybe required.
- Personal details of the child should be written such as the name, date of birth, age and date of assessment.

Age	Gross Motor
1 months	<ul style="list-style-type: none">• Held in sitting position may hold head momentarily.• Held in prone position with hand under abdomen, momentary tensing of neck muscles is noted• Prone momentarily holds chin off the couch.• Pull to sit-almost complete head lag.
2 months	<ul style="list-style-type: none">• Held in sitting position head up but recurrently bob forward.

	<ul style="list-style-type: none"> • Held in prone position with hand under abdomen-holds head up so that its plane is in line with that of the body • Prone-head no longer mainly turned to just one side as in earlier weeks. Recurrently lifts chin off couch so that plane of face is at angle of 45 degree to couch. • Held in standing position-is able to hold head up more than momentarily.
3 months	<ul style="list-style-type: none"> • Prone hold chin and shoulders off couch for periods, so that plane of face is at an angle of 45-90 degree from couch. Bears weight on forearms. • Pull to sit from supine –only moderate head lag. • Held in prone position with hand under abdomen- holds head up so that its plane is beyond that of the body.
4months	<ul style="list-style-type: none"> • Held in sitting position holds head well up constantly. • He looks actively around, but head still wobbles if examiner causes sudden movement of trunk. • Curvature of back now only in lumbar region as compared with rounded back of earlier weeks. • Prone-holds head and chest off couch so that plane of face is at 90 degree to couch. • Weight still on forearms. • Pull to sit – Only slight head lag at the beginning off the movement. • Supine-head no longer rotated to one side as in earlier weeks.
5 month	<ul style="list-style-type: none"> • Full head control. • Held in sitting position head stable when examiner mildly rocks body • Pull to sit no head lag.
6 month	<ul style="list-style-type: none"> • Prone weight borne on hands with extended arms. The chest and upper part of abdomen therefore being off the couch. • Pull to sit head lifted off couch when about to be pulled up. • Hands are held out to be lifted. • Sits (supported in high chair for a few minutes. • Rolls from prone to supine • Held in standing position bears large fraction of weight.
7 month	<ul style="list-style-type: none"> • Prone bears weight on one hand. • Sits with hands forward for support • Rolls from supine to prone • Standing position – can maintain extension of hip and knees for short period when supported. He bounces with pleasure (Previously he sagged at hip and knees).
8 month	<ul style="list-style-type: none"> • Readily bears whole weight on legs when supported. • Sits for a few moments unsupported
9 month	<ul style="list-style-type: none"> • Stands holding on to furniture. • Sits steadily for 10 minutes. Leans forward and recover balance. (Cannot lean sideways). • Prone-in trying to crawl may progress backwards • May progress by rolling
10 month	<ul style="list-style-type: none"> • Pulls self to standing position. • Pull self to sitting position

	<ul style="list-style-type: none"> • Goes forward from sitting to prone, and from prone to sitting • Sits steadily without risk of falling over (except for occasional accident). • Crawls
11 month	<ul style="list-style-type: none"> • When standing holding on the he lifts and replaces one foot • Sitting can turn around to pick up object
1 year	<ul style="list-style-type: none"> • Walks with one hand held • Prone walks on hands and feet like a bear • May shuffle on buttocks and hand
13 months	<ul style="list-style-type: none"> • Stands alone for a moment
18 months	<ul style="list-style-type: none"> • Climbs stairs unaided, holding rail. • Runs. • Seldom falls • Jumps. • No longer broad base and high stepping gait when walking. • Seats self in chair, often by process of climbing up, standing, turning around and sitting down. • Pull toy as he walks • Throws ball without falling, as previously.
2 years	<ul style="list-style-type: none"> • Picks up object from floor without falling. • Goes up and down stairs alone, two feet per step.

What can be done to include a child with physical disability in a classroom?

It is important to know ways in which to conduct activities in a class such that all children are included in it. There are some areas in which children with physical disabilities may face difficulties within a classroom and which may lead to their non-inclusion. Those areas are:

- Seating
- Mobility (moving around)
- Feeding/Drinking
- Toileting
- Writing

It is important to also keep in mind that difficulties can easily be resolved with an open mind and with some knowledge of solutions that can be carried out in each area.

Why is Adapted Furniture important for a child with physical disability?

- It provides security to the child and makes working easier for them.
- Correct sitting posture makes communication easier for the child.
- Eating and drinking are convenient and easier in the sitting posture.
- It prevents the joints from getting tight and thereby prevents restriction of movement of the joints that may occur at a later date.

How is it possible to design adapted seats?

- Below shown are some photographs of children using adapted seating in the classroom.
- Children can sometimes have difficulty in sitting up or have a poor sitting balance. At such times it is important to make certain modifications in the chairs and seats used by them. These modifications can be done in a very cost effective way. Materials like cane, bamboo, bucket, tyre etc can be used.

- For the rural and peri-urban areas adapted chairs can be made in a very cost effective way using materials like cane, bamboo, bucket, tyre etc. This helps in aiding inclusion in the rural and peri-urban areas.

Modified chairs used in Classrooms

- The chairs have belts to support the children and provide safety and security
- The height of table is adjustable to make working easier.
- The chair has supports and belts to hold the feet in correct position.
- The designing of adapted seating is always on an individual basis and varies from child to child

This is an example of a child using adapted seating in our site for aiding teaching.

What are the various techniques you could use in carrying a child?

The pictures below describe various carrying and handling techniques,

Why are walking aids important?

- As a child moves around he experiences his environment.
- This experience leads to development in various other areas. Therefore it is necessary even for a child with mobility difficulties to have this experience.
- To provide a child with disability to have the experience of walking, there are various aids available. They are
 - Crutches
 - Walkers
 - Wheelchairs

What are the various aids used for feeding?

- There are also some simple aids which if used at home and the school could improve the child's independence in eating.
- These aids can be provided by making modifications on regular spoons and cups.

What are the various stages involved in toileting?

- Indication
- Going to the toilet
- Undressing
- Managing activity independently
- Cleaning
- Dressing and coming back to class
- However in the community children use the roadside nallas. Hence in the early stages, toileting is never an issue. As children grow older they may require special aids to support them and also to maintain hygiene.

What are the various aids that could be used for writing?

- Writing for children with disabilities may be difficult as they have poor or weak grasp and are unable to hold a pen or a pencil properly.
- This may pose a difficulty with inclusion. But here again this can easily be tackled using simple aids or modifications as and when required.
- Often just a slightly thicker pencil or pen is held better than the pencils of the usual thickness.
- Some other modifications that can be done on regular pencils or pens are by fitting them with the following:
 - A large eraser
 - Gas tubing
 - Thick cloth
 - Padding done with sponge and leather.
 - Small size potato.

The different types of disabilities that the Anaganwadi worker should know of are:

- Cerebral palsy
- Hydrocephalous
- Spina – bifida
- Polio
- Muscular dystrophy
- Downs syndrome
- Rickets
- Epilepsy

CEREBRAL PALSY:

- Cerebral palsy means physical difficulty caused due to an injury to the brain. It cannot be cured by medicines or operation.
- Generally children with cerebral palsy have one or more different forms of disability. A few causes that may have brought about such a condition would involve events before birth, during delivering and after birth. If exposed to proper educational inputs like all other children, children with cerebral palsy may improve intellectually with such an environment. Educating children with cerebral palsy requires certain modifications and adjustments to the school environment and teaching methods.
- With proper methods, of teaching, modified curriculum, multilevel teaching and support system they can be educated in regular schools without any difficulty.

HYDROCEPHALOUS

- This condition occurs due to the presence of an enlarged head as a result of excess accumulation of fluid in the head at birth. This excess fluid applies pressure on the brain resulting in brain damage. This damage causes weakness in the limbs. Often associated with Spina – bifida.

SPINA BIFIDA

- The bones in the spine often do not form properly and some gap gets left out at one end this results in the spinal nerves bulging out of that open end. Depending on the severity of the bulge or pressure of the bone on the nerves, the limbs become weak or paralyzed.
- Children often have a bulge on their back or a dimple / tuft of hair.
- Other than weakness of the limbs children also lose their sensation. Hence they are not able to differentiate between hot, cold, soft, hard, etc. it is important to teach these children to observe their body parts for any injuries or redness. They often do not have bladder/bowel control and many of them use catheters.
- Hygiene and importance of prevention of injuries needs to be explained to the parents.
- Their intellectual development is not hampered and they can be easily educated with a little support.

POLIO

- Polio may be a result of viral infections caused due to unclean surroundings, dirty toilets, and presence of rubbish around the house, which leads to ingestions of unhygienic food. What we see and call 'polio' is actually paralysis, which follows this viral infection. Here the damage is at the spinal level. The motor part of the nerves causing muscles to contract are the ones which are affected. But the sensory part of the nerves i.e. sensations of the pain, touch, heat, cold, etc, are intact. This disease has no effect on the emotional and intellectual development of the person and any associated emotional problems present due to psychosocial factors.

MUSCULAR DYSTROPHY

- It is a progressive disorder of muscles, which is caused due to certain genetic problems that take place during conception. Often it can be due to genes present in the father or the mother.
- Due to the progressive nature of the disorder the child becomes more and more weak, hence loses ability to walk or use his hands. But intellectual development is not affected.
- At 4-5 years of age child starts to walk with a waddle. He falls more often. As the years go by, weakness increases. Often children develop respiratory or cardiac muscular weakness that may prove to be fatal.

DOWN'S SYNDROME

- Children with Down's syndrome may be recognized with certain prominent facial features such as they have small eyes and ears, flat nose, small mouth which is often kept open all times. They have very floppy muscle tone due to which they are many a

times late walkers. Most of the children have experience intellectual difficulties and hence curriculum modification and multi level teaching is very important to them.

RICKETS

- Rickets is results in the weakness of bones and improper built due to a vitamin D deficiency. Proper diet rich in calcium and proper exposure to sun ca prevent this. Mother's diet during pregnancy should also be nutritious as this might also be one of the causes of rickets.

EPILEPSY

- Epilepsy seizures can be of many types. Two of the most common types of seizures are:
 - Big seizures
 - Small seizures

WORKSHOP ON SPEECH, LANGUAGE AND HEARING DISABILITY

Lecture no. 2

What is communication?

- It is a transfer of a message from a speaker to a listener.

What is language?

- 'Language is what you talk' or 'the content of your conversation'.
- It is needed for communication.
- It is an ability of the brain to understand and express.
- Always comprehension develops first then the expression.

What is Speech?

- Speech is 'how you say it'.
- It is an oral language.
- It is one of the modes for expression.
- The most natural, fastest and efficient mode of expression.

What is hearing?

- Hearing is the proper working condition of the ear.
- Ability to hear.

What are the pre-language requirements?

- Pre-language learning developments are:

Area	Example	Response
1. Attending	Attends to a toy placed in front of him	Yes / No
2. Imitation of body movements	Imitating bye-bye, clapping hands etc	Yes/ No
3. Imitation of sounds	Tries to imitate the sounds or words like 'pappa' 'Tata'. 'Bye-Bye' or 'Mama' etc	Yes / No
4. Objects permanence	Follows movement of an object with eyes. Searches for hidden objects	Yes/ No
5. Use of objects	Performs same action on different objects and different objects and different actions on same object	Yes / No
6. Means end relation	If wants a toy kept at a height, will use a chair to climb to get it or pull an adult and point at the object he wants.	Yes / No

These 6 areas develop within first eighteen months after birth

What are the pre-speech requirements ?

The pre-speech requirements are :

	Pre-Speech requirements	Response
1.	Does the child show normal neuromotor maturation	Yes/No
2.	Does the child have a normal hearing system	Yes/No
3.	Does the child have adequate physical and emotional support for the growth of oral language (Speech)	Yes/No
4.	Does the child show normal intellectual capacity >	Yes/No
5.	Does the child have a language nurturing and stimulating environment?	Yes/No

If there is 'No' response in any of the above requirements then there may be delay in speech, language or hearing development

Why is hearing, language and communication important?

- Speech is acquired primarily through the ear and children who have a hearing loss and processing problems will often show delay or impairment in speech and language development.
- At all stages of language development, understanding (comprehension) by hearing is the first to develop, followed by expression or speech.
- The child listens carefully in the early years. He picks up language by hearing then imitating sounds and later adding meaning to it.
- Children in Anganwadi generally fall within the critical period (0-5 yrs) and hence language stimulation is important.
- During this period the rate of learning is fast, so the children, specially with disability, must be taught and exposed to a good language learning environment.
- Communication is essential for healthy social and emotional development as well as for academic achievement.
- It helps in concept formation.
- In ability to communicate will prevent socialization and develop frustration, low self esteem and other behavioural problems.

What is the importance of knowing the speech and language milestones?

The importance of knowing the speech and language milestones is as follows

- To know if there a delay in speech and language development.
- It's a guide to proceed to the next stage.
- It can help us identify and correct any abnormal development.
- It will guide the teachers to use this level of language for teaching that particular child.
- It will also help us to know the cause, and may help in correcting the cause, so there can be a faster improvement.

What are the speech and language milestones from 0-5 yrs?

Age	Speech and Language milestones
0-1 months	Crying
2-4 months	Cooing and vocalizing, turns at the sound of a voice
4-6 months	Babbling, looks at the mothers face as he listen to her
6-8 months	Varied Babbling (in different tunes and sounds)
8-9 months	Jargon speech. Concept formation
9-12 months	First true word (calls 'mama' to mama only), understands and responds to gestures, facial expressions, recognizes voices.
12-18 months (1-1 ½ year)	Understands a few verbal labels (ex dudu bottle, food bye-bye etc) Uses one word sentences (ex 'Dudu'-meaning give me milk) Has a vocabulary of about 50 words
18-24 months (1 ½ - 2 years)	Selects familiar objects when named Uses more one of word sentences
24-30 months 2 years – 2 ½ yrs	Relates two named objects (ex – Put the spoon in the cup) Names all familiar objects Speaks 2 word sentences (Ex 'Papa car', 'Give ball')
30-36 months (2 ½ - 3 yrs)	Knows the functions of objects. Uses pronouns, preposition and adjective. Speaks 3 word sentences (short sentences or phrases) (Ex. Give a ball, Dudu is hot, give big ball')
36-48 months (3-4 yrs)	Understands complex sentences having 3-4 operative words (first, close the door, then sit and colour the fruits)
4 yrs and above	Use of past and future tense Is able to use language well, specially for socialization and education, can carry out commands with two three actions

- What are the responses of hearing at different age group?

How to identify speech and language ability and disability through a simple checklist?

Checklist for Speech and Language Milestones (2-5 yrs)

Name of the student: -

Age/ sex: -

Date of birth: -

Date of test: -

Language used for test: -

Teacher / therapist:

Hindi/English/Marathi/others.

Put " for 'yes' and 'x' for 'no' for the questions in any one of columns (0, 1, 2, or 3)

2-3 years					
	Ability	Never 0	Occasionally 1	Often 2	Always 3
1.	Requests items by name (give ball, give water etc)				
2.	Indicates toilets needs (I want to do / am doing / already did susu)				
3.	Names everyday objects (Water, ball, biscuit, comb, soap etc)				
4.	Points to pictures in a book when named (picture of apple, glass etc)				
5.	Shows body parts on request (nose, eyes, ears etc)				
6.	Follows simple commands (come here, go up, sit down)				
7.	Asks 1-2 word sentences or phrases				
8.	Uses about 2-3 words sentences or phrases				
9.	Understands in, out, up, down, in front, behind etc				

3-4 years					
	Ability	Never 0	Occasionally 1	Often 2	Always 3
10.	Understands functions of objects (Do you use a comb to comb hair? Yes/no)				
11.	Follows 2-3 part commands (Go and get a pen?, First sit, then open the book and colour)				
12.	Uses 3-4 words in a sentence				
13.	Identifies object easily by name alone				

4-5 yrs					
	Ability	Never 0	Occasionally 1	Often 2	Always 3
14.	Can imitate and count till 5				
15.	Understands concept of				

	numbers upto 3				
16.	Recognizes 1-3 colours (Red Blue, Green)				
17	Counts to 10 by rote				
18	Uses sentences of 4-8 words				
19	Answers a complex 2 part questions				
20	Talks about experiences at school and home				
21	Can the child make requests (ask the child to colour but don't immediately prove a pencil)				
22	Does the child wait to listen to you and take part in talking				
23	Does the child make eye contact				

If 'no' is mostly in

Column 0 and 1

Go to the nearest child care centre

Column 2

Go to the speech therapist

Column 3

Go to the speech therapist

What are the areas that can be focused on to improve speech, language and communication?

Focus should be on the following areas,

Improve eye contact,

- Use a coloured object, first put it in front of the child's eyes and then slowly take it near your face.
- Use noisemakers to draw attention and then the noisemaker should be brought towards your eyes.
- Call him by his name and tell him to look at you. Keep reminding him to look at you.
- Sit in front of him at his eye level.

Increase duration of maintaining eye contact,

- Seating should be proper so that the child has support for his neck and trunk and you sit at the eye level of the child (that is, your face level).
- Change your facial expression/voice while expressing various words and sentences.
- Time each activity and check the increase in the duration of maintaining eye contact.

Increase attention concentration,

- Sorting out the same kind of objects/big vegetables/small vegetables or picking up lentils from rice. Searching for five coins from the pile of sand then slowly increasing the numbers of hidden objects.
- Keep a small bottle lid in the bucket and fill it with water then give the child small pebbles or 25 or 50 paise coins to drop it in the bucket and it should fall inside the lid,

give the child a token when he/she gets 5 coins inside the lid. (i.e. 5 coins is equal to one star or five coins is equal to one chocolate).

Improve understanding,

- Use one-word utterances, and if possible small sentences may be used, and then stress on the key words. For instance, do you want to drink MILK?
- Only if needed say the word “milk”, by showing the picture of milk or by showing the action of drinking milk. (Remember to use as few clues as possible if the child can understand, but more if the child cannot understand, then slowly decrease the clues as the child improves).
- Don't underestimate a child just because he is non-verbal.
- You may tell short stories and ask questions to the child. Let the child use any way of indicating his/her answers. For instance, spell out on the spelling board, answer yes/no or head nod, point to the pictures or a word or an answer by using one word or two word utterances.
- Describe the activity the child is doing or you are doing.

Improve expression of Speech and language

- Encourage the child to use one-word utterances or two word utterances or two small phrases e.g if he/she can say one word utterances (throw, ball, mama, give etc.). Then encourage him/her to use two word utterances (mama ball, mama give, throw ball, etc.). Move on from simple sentences to complex ones as per his/her ability. If he can say one word then encourage him to use two combinations. Words such as Throw, ball, mama, or give. Later can be made into two word combinations like, 'mama ball'. 'Mama give', 'throw ball'.
- Sometimes pretend to forget the word or say the wrong word so that the child reminds and corrects you with the right word.
- If the child cannot use speech for expressing, or if the clarity is poor, then use communication board (AAC) as per his ability.

Improve loudness,

- Playing games wherein a child would have to phonate the vowels 'a' or 'i' continuously as long as he can. You may have to time it or move an object as long as the child says the vowel to give a visual feedback of the duration of the time.
- Breathe in and out slowly.
- Call out loud.
- Encourage the child to open the mouth and talk.

Improve breathing

- Say the phonics 'a' or 'e' etc in one continuous breath.
- Counting as many numbers or alphabets as possible in one continuous breath
- Playing games in which you can hold your breath as long as possible

How to identify children with hearing loss using a checklist?

- The checklist will contain the following
 - Name of the student Date of birth
 - Date of test Language used for test
 - Teacher / therapist

	Expected Response	Yes	No
1.	Does the child keep looking at you while you are talking		
2.	Does the child want the volume of Radio or TV to be kept abnormally high?		
3.	Does the child frequently misunderstand what is said to him		
4.	Does the child miss out on consonants		
5.	Does the child cup ears or bend head in the direction of the sound		
6.	Does the child speak louder than the situation demands		
7.	Does the child prefer staying away from activities where listening is required		
8.	Does he lack attention in what is being taught		
9.	Does the child want the same instructions to be repeated		
10.	Does the child have problem in reading and writing		
11.	Does the child respond to name call		
12.	Does the child take interest in class activities		
13.	Does the child play with friends		
14.	Is the child nervous and unhappy		
15.	Does the child react differently to different sounds in noisy and quiet place		

Scoring:

- If there is 'yes' in any of the column from questions 1-7 then he should be referred to an Audiologist - Speech Language Therapist. If 'yes' in any column from question 8-15 then more observations need to be done to rule out difficulty in attention concentration, auditory processing or mental ability to understand sounds and react appropriately.
- For this, the Anganwadi worker can also test the child's hearing informally in the following way:

Simple way of identifying hearing loss by the Anganwadi Worker

- First a quiet place or corner has to be chosen.
- The child will be seated facing another helper who will observe the reactions of the child to the sound being made and noting the reactions.
- The sound has to be made from behind, left side and right side of the child without giving any other clue (visually or through vibrations).
- Hand clap, whistle, banging utensils or two blocks, plate and spoon, bell, shake a match box with two sticks, tin with pebbles or seeds, marbles, or any other noisy toys can be used as sources of sound.
- If reaction is not consistent or does not react at all then refer the child to the Audiologist Speech Therapist.

What are some of the good teaching practices teachers can use with a child with hearing difficulties?

- There should be strong lighting all over the room
- Never speak to the child if he/she does not look at you. Always speak or sign turned directly towards the children, and not with your back or side towards them (e.g. when writing on the blackboard).
- Talk in a natural manner, without exaggerating facial expressions.
- The child should be exposed to only one language, preferably the language spoken at home.
- If the child is wearing a hearing aid, then encourage wearing it all the time.
- Regularly check whether the hearing aid is working, or not.
- Use all kinds of clues to dramatize or clarify what you are talking by pointing, drawings, pictures, flash cards, key words on the blackboard.
- Let your child feel the vibrations at the throat, nose and mouth while the person is speaking.
- Encourage your child to imitate your lip movements. Use the mirror to show him the movement of the lips and the tongue.
- Can also use AAC both for communication as well as for education

What is Alternative and Augmentative Communication (AAC)?

- It is a non-verbal mode of communication.
- It is a mode of communication (expression) with the use of a symbol (pictures, typed or written alphabets, words or sentences, sign, gestures, role play, mime etc) other than speech.
- It enhances, facilitates, or compensates for speech.

Who can use AAC?

One who can understand but

- Cannot speak at all
- Can speak a little
- Cannot speak clearly

What are the various ways of pointing?

Various ways of pointing are through

- Eyes
- Fist
- Palm
- Finger
- Toe
- Elbow
- Tongue
- Head etc

Basic Principles in Speech Language Stimulation

First build a very good rapport

- Go down to the level of the child
- Don't use baby talk
- Don't keep repeating the mistake of the child
- As far as possible don't use "don't", rather say "say like this"
- Give choice
- Give command in the language level of the child
- Encourage expression or communication
- Use AAC with non-verbal children or children whose speech is not clear
- Allow him to initiate communication
- Remind the child to maintain eye contact throughout conversation
- Help the child maintain the topic during conversation
- Appreciate/encourage the child for making even an attempt to communicate
- Comprehension is always better than expression, that is, the child may understand much more than he will express
- When you are teaching a child to imitate let your face be at the level of the child's eye
- Let proper light fall on your face
- Don't exaggerate while pronouncing
- Don't chew or eat anything during speech
- During therapy with the hearing aid see if the H/A is benefiting, then he will cooperate better, hearing your commands
- Don't pamper the child
- Use all senses while stimulating (ear, eyes, touch, taste and smell)

What do you need to know about feeding?

- Feeding is important for survival and good health.
- Feeding is affected in children with brain damage
- Improvement in eating (sucking, biting, chewing and swallowing) improves clarity of speech.
- Teachers feed the children during school hours hence it is important to know a few intervention strategies related to feeding.

What should be done to bring about an improvement in eating?

The Posture / Position of a child should be checked

- The child should be first supported at a 45-degree angle (semi lying position)
- Then supported 90 degree angle (supported straight sitting positions)
- Then gradually move on to sitting independently for most of the time.
- Remind the child that he/she will get help whenever requested and encourage the child to sit straight

Textures of food :

- Help the child Textures of food : eat a normal diet

- Help him to learn to swallow food of various consistencies mentioned below as per his swallowing ability.
 - Clear liquids (milk, juice, tea, water)
 - Thick liquids (milk shake, thick soup etc)
 - Soft solid (mashed boiled potato, ground food)
 - Solid (rice, chapatti, vegetables)
 - Hard (Chickie, chocolate, raw fruits, salads)
- If swallowing is present at soft solid level then teach the child to chew and swallow simultaneously and help him go from one stage to another. That is: -
 - Soft solid (boiled, ground food)
 - Solid (regular food)
 - Hard food (raw fruits, chickie, chocolate)

To improve drinking and sucking fluids,

- Start giving liquids with a spoon/dropper at the back of the tongue.
- If the child can seal his lips well then let the child use the glass and encourage him to hold the glass by himself.

To improve chewing,

- Give bigger pieces of fruit and put it between the teeth (towards the inner side).
- On command let the children open and close their mouth. Initially let it be done slowly, then slowly increase the rate of giving commands.

To improve lip closure

- Singing songs like “old MacDonald”. The lips usually pucker and stretch open alternatively while saying the phonics i a i a o.
- Help the child hold a thicker object with his/her lips and increase the duration slowly. Also slowly decrease the thickness of the object.

To help/encourage the child to have a dry mouth

- Tell the other children to supervise/remind the child with a difficulty to close his mouth and swallow saliva as well as wipe his mouth himself.

To help increase the muscles strength of lips and cheeks

- Blowing activity: Such as blowing the table clean, blowing hot tea or blowing a whistle, candle. Playing pretend games i.e pretending to get hurt and blowing the wound to relieve the pain. Have pretend birthday parties and make the child blow the candles. Having competitions by keeping a piece of paper, measuring and showing the child how far it has gone in one blow and encouraging the child to blow it further.

Refer the child to a speech therapist for guidance, when the following problems are observed:

- Bite reflex (sudden closure of jaws)
- Jaw instability (unequal closure of jaw)
- Inadequate lip closure.
- Tongue thrust (Automatic pushing out of tongue)
- Drooling
- Vomiting
- Other problems during eating food

Remember these few tips on feeding

- Help the child develop as normal a way of eating or feeding as possible.
- Help the child eat as normal and balanced a diet as possible.
- Allow the child to choose the food.
- Communicate a lot
- Give adequate water to drink
- Wash hands before and after eating
- Always help\remind to rinse mouth after eating.
- Give only 30 mins to eat food. Extend time in case of children with severe disabilities

MODULE 2

WORKSHOP ON EDUCATING CHILDREN WITH INTELLECTUAL DIFFICULTIES

Why is it important to know about the various stages of intellectual development?

- An important area of development in the early childhood years is the development of the child's thought processes.
- The growth in thought processes enables children to receive and use knowledge about the world
- To understand and teach children, it is important and interesting to know how children think and the stages that children go through in developing their thought processes.

What are the various stages of development?

The various stages are as follows

(0 – 2 years)

- From birth to about two years, a child learns and explores more about himself / herself and he / her world through the senses (Vision, hearing, smell, touch and taste) and constant interaction with his environment through various activities.
- It is also at this time that they gradually become aware of their environment and that their actions have some effect on their environment.
- They are also aware of the information they receive through their eyes, ears, nose etc.. and can react to it accordingly.
- They gradually move from trial and error to learning to solve simple problems.
- The child at this stage realizes an object or person continues to exist even when out of sight. For instance, the mother may feed her child and then go into the next room. Even though the child cannot see his / her mother, he / she knows that she is in the next room.
- At this time, they gradually start learning that certain events cause other events and therefore their behavior starts becoming purposeful. They try new activities through trial and error.

(2 – 6 years)

- In this stage children can think about objects, people, or events that are absent by using pictures that are framed in their minds.
- At this stage they learn by providing a concept / idea / word with an image. For instance, a ball is a round object that is used for playing. Hence when we use the word apple or ball it is a symbol for that object.
- Knowing the symbols for things helps the child to think about them and to communicate with other people with them.
- At this stage, a child also learns to observe and imitate behaviors or actions performed by other people.
- As teachers, it is important that we understand the changes in cognitive development that occur in childhood.
- Children have varying ability levels and hence it is important to go at their pace. These stages. Only provide guidelines for us to understand how the child handles a wide range of intellectual concepts.

How we can evaluate delays in development in class?

- During the course of a child’s development you may notice that your child is experiencing some difficulties in his / her intellectual growth. They include:
 - Difficulty in understanding ideas and words
 - Difficulty in understanding instructions, resulting in the child facing a difficulty in carrying out the task that requires basic self – help skills
 - Difficulty in grasping the school curriculum
 - Difficulties in communication
 - Difficulty in recalling information that the child has learnt earlier

Here is a simple exercise that would provide you with an approximate evaluation of the degree of delay in development. This exercise should be carried out on a child who is around 2 – 3 years of age.

Serial No.	Questions	Yes	No
1.	Can the child identify parts of the body? This task aims at helping the teacher assess whether the child is aware of her / himself and his body.		
2.	Can the child follow simple instructions like, go get that ball or close the door, etc? This gives an approximate measure on his level of comprehension.		
3.	Can the child build blocks? This activity provides a general picture of the child’s gross motor skills.		
4.	Can the child string beads? This activity provides information on the child’s fine motor skills.		
5.	Does the child interact with the other children in class?		

	This provides information on a child's social and emotional development.		
6.	Does the child comprehend basic concepts required for communication such as yes / no? This also gives an approximate measure on his level of comprehension.		

- If more 'no' responses than 'yes' responses are observed the degree of delay is more.

What information about the child could you receive from the exercise?

- Such an exercise would provide you,
 - With a general picture of the child's awareness of the self and the environment.
 - The ability to associate a concept with its meaning (for instance, a banana being a fruit that is long and yellow)
 - Comprehension, an idea of his / her motor skills.
 - A general picture on his / her social and emotional development.
- These are not definitive measures of a child's development. They are signposts to watch for, not diagnoses. You can, however, use them as way to help the child to learn.
- Therefore a child who may be able to identify the parts of his body, a few household objects or objects present in his room not as well as follows simple instructions may face very minor intellectual difficulties or may not even face that.
- On the other hand a child unable to carry out any of the above mentioned tasks especially the first three tasks, indicates that the child could face difficulties in comprehension, awareness and the ability to associate a concept with its meaning and hence may experience severe intellectual difficulties.
- A child who cannot perform the fourth and the fifth ask only may be facing physical difficulties however intellectually may be functioning fine. In such a situation the child can follow simple instructions but cannot carry out the task due to physical difficulties.
- Difficulties observed in a child's interaction with other children may be indicative of problems in that child's social and emotional development.

What teaching practices could you use to enhance learning in children facing intellectual difficulties?

- Breaking down complex questions into simpler ones and dealing with them one at a time.
- Individualizing the teaching and remembering that each child learns differently so requires different attention and techniques from the teacher.
- Using demonstrations to explain words or ideas and revising, reviewing as well as repeating information in order to maintain information learnt.

- Explaining a single idea at three different levels. Firstly through picture, then through a three dimensional object and lastly through a play.
- Each idea / word should be taught one at time.
- A child with intellectual difficulties may need some time alone with the teacher to understand a concept.

MODULE 2

WORKSHOP ON EDUCATING CHILDREN WITH VISUAL DIFFICULTIES

Children use their sight to learn various things. It is important that visual impairment is detected early, otherwise it can affect the child's development.

What are some early signs that could indicate visual impairment?

Some of the signs of visual impairment that should be referred to an eye specialist when noticed:

- The child rubs his eyes constantly.
- Crossed or misaligned eyes.
- He / she tilts head.
- The child bangs his head or pokes into his eyes.

What are common visual impairments that we see in young children?

The common visual impairments are nearsightedness and crossed eyes. Nearsightedness (myopia) is a condition in which distant objects appear blurry while crossed eyes is a condition in which one eye do not aim directly at the object to which the other eye is aimed. Both these conditions if not treated could lead to loss of vision in one eye.

How can a child with visual impairment be included in a classroom?

When a child with visual impairment is included in a classroom, it is important that he progresses with the other children. The anganwadi worker should be aware that all children have personal differences. She can help the child feel confident and be together with all the other children.

How can we help a visually impaired child feel confident?

- Do not hesitate to use the word 'see'. A visually impaired child uses this word in his own way.
- Introduce him like all the other children.
- Include them in all the activities of school. e.g. physical education, home science, etc.
- Give him a chance to be the centre of attraction of the class like all other children.
- Let the visually impaired child also follow the same rules in school as others do.
- Encourage the child to pick up and keep his own things by himself.
- Use words instead of gestures while communicating with him.
- Let the sighted children know about blindness.
- If the teacher's attitude towards the child is of acceptance, the whole class will accept the child.
- Encourage the children in the class to interact with him.

How will a visually impaired child use regular printed material?

- Blackboards – Encourage the visually impaired child to sit in the centre of the front row. Some children cannot stand bright light while some children need more lights. All this should be taken into consideration.
- When the teacher is writing on the board, she should also say it loudly. Thus the visually impaired child can also write.
- If a child wants to see charts from close distance, let him do that.
- Braille charts and maps can be used.

Sources:

- Extracts from the booklet ‘When you have a visually handicapped child in your classroom: suggestions for the teachers’ by National Association for the Blind.
- Braille by Royal National Institute for the Blind.

MODULE 2

WORKSHOP ON HEALTH AND NUTRITION

Why is it important for a child to be healthy and have a nutritious diet?

- The word ‘healthy’ means being well and physically fit.
- Health and education go hand in hand.
- Nutrition is one of the important factors as far as a child’s health is concerned.
- A child from a lower socioeconomic background, can get a nutritious diet.

What are the important constituents of nutritious food?

- Proteins
- Vitamins
- Starch
- Carbohydrates
- Fats
- Minerals
- Water
- Roughage

What types of food provide the children with the appropriate quantities of nutrients?

- Rice, wheat, bajra, jowar, potatoes, etc. contain carbohydrates, which provides children with energy.
- Eggs, meat and sprouted pulses like moong, chana, chowli, rajma, matki, etc. provides children with proteins, which are necessary for the wear and tear of the body.
- Ghee, butter, etc. has fats, which gives us energy. Groundnuts, sesame also has high fat content.
- Milk, nachani, barley, green leafy vegetables, eggs, meat, etc. are rich in minerals like calcium, phosphorous, sodium and iron. They are necessary for strong and healthy teeth and bones.
- Vitamins can be found in various fruits and vegetables.

What s a well balanced diet?

A well balanced diet includes:

- Clean food

- Not very expensive food
- Foods, which can be cooked at home
- Food which gives strength

What should a child's tiffin contain?

- The tiffin should contain food which is cooked at home and provides the child with all the nutrients necessary for the body so that child can be healthy.
- Parents should stop giving money to the children to buy food from roadside which can be harmful as it is left out in the open and attracts flies.
- Food items like poha, upma, idli, dosa, puri, paratha, roti, biscuits, etc. can be given in the tiffin.
- This table will give you an idea of food available for a rupee.

Sr. No.	Types of Food	Grams	Kilo Calories	Proteins
1.	Soyabean	100	420	42
2.	Chhole	50	260	11
3.	Chana	67	250	15
4.	Rice	150	450	10
5.	Milk	100 ml	067	04

Calories and proteins we get for Re. 1

This table gives you an idea of the number of calories a child should consume daily at different ages.

Child's Age	Calories	Protein (Gram)
Birth to 6 months	600	11
6 months to 1 year	800	15
1 to 3 years	1200	18
4 to 6 years	1500	22
7 to 9 years	1800	33
10 to 12 years	2100	41

How do you identify a malnourished child and what do you do?

- A chart of measurement of a child's body parts and his height / weight as per his age can be used to detect malnutrition.
 - Less height
 - Less weight
 - Thin hands and legs
 - Wrinkled skin

➤ Malnourished child has a bigger head than the body.

- If the child does not get the expected calories as per the age of this child can get malnourished. Hence a properly planned diet should be given to these children and information about the constituents of a diet should be explained to parents in an Anganwadi.

How is malnutrition related to disability?

- Malnutrition usually occurs in poverty stricken areas where access to food, health services, sanitation, proper care and feeding of children is affected. In addition when a pregnant mother is not provided with appropriate nutrition then the baby is at a risk of experiencing disability.
- Deficiencies of vitamins like Vitamin A deficiency can lead to night blindness, Vitamin B deficiency will lead to beriberi and Vitamin D deficiency will lead to rickets.
- Sometimes a child might experience problems in feeding and hence the child is neglected and is not provided with the appropriate amount of nutrition.
- Besides malnutrition, various diseases can also be considered as a cause of disability, especially when an infant or a mother is exposed to it.
- Conditions like Cerebral Palsy, Down's Syndrome, cleft lip, etc. could occur as a result of the mother being malnourished.
- Infections like poliomyelitis, tuberculosis, cholera, malaria, etc. can affect a child's development.
- Injury like injury to head, spinal cord or to any internal organs can result in some disease or other conditions.

How do we prevent these diseases?

Diseases can be prevented by providing information to parents on the following areas:

- **Immunization:** The baby should be immunized and given vaccinations upto the age of 5 years. They are for the diseases like tuberculosis, diphtheria, whooping cough, tetanus, poliomyelitis, measles, mumps, German measles, etc. Now they have come out with a vaccination for jaundice and chicken pox as well.
- **Mother's Health:** Mother's health during pregnancy is very important and should be taken care of. Proper diet, food supplements, vaccination should be taken care of to have a healthy baby. Mother's age, marriages within the family, family planning, etc. also affects the child's health.
- **Habits that are injurious to health:** The child or pregnant mother should not be exposed to radiation and smoke, and the mother should not consume drugs, alcohol, tobacco, or certain medicines during pregnancy, as it is harmful for the baby.

- **Clean Habits:** Hygienic habits such as having a bath and brushing teeth everyday should be taught to the children. Also cutting nails, wearing clean clothes, washing hands and feet after coming in from outside, etc. are the habits that should be imbibed by the children to prevent diseases from occurring.
- **Health and Hygiene:** Information on health and hygiene that includes keeping the house clean, keeping food covered, drinking clean water (boiled water is the best water), keeping the vessels and clothes clean, disposal of garbage, spraying insecticides on marshy land, and keeping the gutters clean should be imparted to the parents to prevent epidemics from spreading.