BLOCK 3
EARLY INTERVENTION: FOSTERING DEVELOPMENT ACROSS DOMAINS

BLOCK 3 INTRODUCTION

The early years are critical for development in various areas and the child is susceptible to favourable and unfavourable influences. Favourable experiences can stimulate growth and development, and unfavourable influences can leave negative results, which are often irreversible. Loss of vision poses a limitation on the individual to a certain extent and it is important to lessen its impact. Sight enables us to learn by watching others doing various activities. Since this input is not available to those with visual impairment, one needs to make systematic and organized efforts to bring a variety of experiences within the person's reach. Therefore, it is all the more necessary that the critical time of the early years is utilized to provide a variety of stimulating experiences. The central theme of the **Units 10 to 15** of this Block is early intervention - in other words, how to foster the all round development of the child right from the time the condition is diagnosed - at birth or later. As teachers and community workers, you have a pivotal role to play in fostering the child's development in various doamins, as well as training her to be independent, mobile and capable of carrying out activities of daily living.

The theme of **Units 10 and 11** is sensory training. Persons with vision loss need to rely on the other four senses a lot more as compared to the sighted individuals. Though it may appear that the other senses automatically become sharper, this is not actually so. A person with visual impairment needs training and stimulation to make effective use of the other senses. Sensory training must begin as soon as loss of vision is identified. How this training may be provided, right from infancy, and the activities that one could carry out in this regard, are described in Unit 10.

Units 12 and 13 focus on fostering cognitive (mental) development. These describe how we develop concepts - about people, objects, situations and events. While discussing how the process of concept formation may be different when a person cannot see, these Units describes a number of strategies and activities that can be carried out to facilitate development of concepts. Most of these activities can be carried out at home and in the school, using materials that can be easily made by you. Some of the ways of developing suitable teaching-learning materials have also been described in the Unit.

Unit 14 focuses on development of oral language and communication skills. Children develop language by seeing and hearing others speak. The more the opportunity children have of doing so, of exploring the surroundings and interacting with others, the more developed their language will be. The absence of sight and limitations of mobility may tend to limit exposure to such experiences. This may negatively influence the language development. The Unit describes how you can break this cycle by providing appropriate activities to foster the development of language during the early years.

Social skills refer to the abilities and behaviours that enable people to interact effectively and harmoniously with each other in daily situations. We can say these are the tools that we use to interact appropriately with other people. As you know there is a particular way of behaving in every social situation. In other words, in every social setting, there is a particular social convention of interacting with each other. In **Unit 15**, you will read about the importance of developing social skills in children with visual impairment as well as some strategies activities that can help you to develop these skills in children.

UNIT 10 SENSORY TRAINING: HEARING AND TOUCH

Structure

10.1 INTRODUCTION

We get to know about the world through our senses. The five senses of sight, hearing, touch, smell and taste — help us to receive information about the environment we are in. Each of these senses has its important role and its loss is irreplaceable.

When one of these senses is absent or impaired, the other senses do not automatically become more efficient to compensate for its loss. What happens is that the infant begins to use her other senses more and, therefore, these other senses may become more efficient than those of a person without disability. This gives the impression as if these remaining senses are more well-developed in a person with disabilityas compared to a person with intact senses. A sighted person does not fully make use of her other senses due to the dominance of the sense of sight, whereas a person with visualimpairment needs to use the other intact senses optimally.

In order to develop and enhance the capabilities of the other senses in a person with disability, a special training programme needs to be followed. This is called, sensory training programme.

Objectives

After studying this Unit, you will be able to:

- explain the meaning of sensory training and explain its importance for the person with visual impairment;
- describe what is auditory training and tactual training how it helps the person with visual impairment;
- list the guidelines to be followed when conducting activities for auditory training;
- carry out activities with the child for auditory training such as enhancing

the ability to discriminate and identify various sounds, localize sounds and understand their meaning in different contexts;

- carry out activities with the child for tactual training which will help her to develop the ability to distinguish textures, shapes, and temperatures through touch;
- facilitate the child's cognitive development by enabling her to form concrete concepts about objects using her sense of hearing and touch; and
- enable the child to utilize auditory and tactile feedback for learning orientation and mobility, and daily living skills .

10.2 WHAT IS SENSORY TRAINING?

Sensory training refers to the training of the remaining intact senses of a person with disability so as to make these as efficient as possible, since these sense must provide information that will substitute (compensate) partially for lack of the impaired sense..in the case of person with visual impairment, this is the sense of vision. In fact, blindness reduces the confidence the person has in her other senses; therefore, adequate training is necessary to orient herto use her other sense organs. Sensory training thus includes stimulation and learning to make optimal use of the

- Sense of hearing
- Sense of touch
- Sense of smell
- Sense of taste
- Residual vision

Sensory training must begin as soon as loss of vision is identified. Early identification of loss of vision is crucial so that the years of childhood, when the various organs of the body as well as the brain is developing, can be trained optimally.

However, the activities described here can also be carried out with adults, with modifications in materials etc, if needed.

These activities can be done either at home or at school. Most of these activities need simple materials that are easy and inexpensive to obtain or make. Besides providing sensory training, these can also be used as recreation, arts and craft activities.

In this Unit, we will focus on the sense of hearing and touch and in the next Unit we will focus on the sense of smell, taste and residual vision.

10.3 TRAINING THE SENSE OF HEARING

Also referred to as auditory sense, the sense of hearing is probably the most important source of information for a person with visual impairment. The person depends on this sensory input to a great extent to get oriented to her environment, to develop concepts, to develop mobility skills and perform

activities of daily living. While we all rely on our sense of hearing in our day-to-day life, we get additional clues from our sense of sight. **For the person with visual impairment, however, the sense of hearing becomes the primary means of gathering information.**

Hence, in order to know about the world, a person with visual impairment needs to have good listening skills. Acquiring good listening skills requires practice and training by an expert. This training is called auditory training. **Auditory training involves helping the person to listen and attend to a variety of different sounds and discriminate between them.** Often, it is provided by a speech therapist. However, parents, family members and teachers can also provide this training.

Auditory training focuses on enabling the person to:

- Be aware of the variety of sounds present in her environment, and pay attention to them.
- Discriminate among sounds, understand their meaning and name the object.
- Select, focus and listen to one sound from among many different sounds.
- Localize sound by identifying the direction of the sound, its source, its movement and its characteristics, and thus know the position of the object from which the sound is being emitted.
- Track sound, which means to follow a sound and move in its direction.

10.3.1 Uses of Auditory Training

1) **Auditory training helps the person in orientation and mobility**. The sense of hearing sense is also called **long-range sense** as the person can hear from a distance without coming in direct contact with the source of sound. The ability to discriminate among various sounds helps the person to select those sounds which provide her with useful information and enables her to orient herself with respect to the environment (understand her location with respect to the environment). Thus, the sound of a car passing on a road tells the person not only whether or not it is safe to cross the road at that moment but also where the road is in relation to her. Against a background of a variety of noises in a farm, for example, being able to identify and localize the sound of the moving bullock cart will give the person an indication about the road and the pavement.

   The ability to localize sound refers to locating the sound in terms of its direction, distance and source, and whether the sound source is moving or not. Once the position of the sound is established, the person may decide to move towards or away from it. For example, on locating the sound of the flowing river, she may move away from it for reasons of safety or move towards it for bathing and washing.

2) **Auditory training helps the person in interacting with other people.** In our daily lives, during social interactions, we all rely not only on what is being said, but also on how the other person is saying something. For example, "You ate this" could be said as a statement or a question,

angrily or pleasantly. The characteristics of the voice, such as pitch (shrillness), loudness and modulation, as also the facial expressions and body language (e.g. posture) of the other person help us to understand what she is saying, and we respond in an appropriate manner. However, a person with visual impairment relies almost entirely on the voice and its various characteristics, to gauge the mood of the other person and understand what she is saying. To be able to do so successfully, auditory training is required.

3) **Auditory training is important to enable the person to carry out daily living activities.** For instance, it enables the person to use equipments like a telephone, oven, cooker, mixer, and so on. She can even learn to pour liquids in a glass with the help of sound. You will study more about helping the person acquire these daily living skills in Units 21 and 22.

4) Further, **there are many aids and appliances for** person with visual impairment**, which use sound as a medium to give information about the environment.** One such device for mobility is the laser cane. Therefore, the user has to be trained so as to understand the meaning of the sounds produced while using the cane.

   There are many educational aids such as talking books, audio cassettes and computers which speak out the text. Talking books and computers use an electronic voice and the audio cassettes contain recording of human voice.

   Auditory training will help the person to use these aids optimally. In Units 23 and 24 these aids and appliances have been described in more detail.

10.3.2 Guidelines for Conducting Activities for Auditory Training

- **Select the activity in accordance with the age of the child**

  First of all, it is important to know what are the sounds to which the child responds. Observe the child to find this out. Does she respond more to male voice or female voice? Does she seem to search for the source of certain sounds or becomes fussy if the sound occurs? Is there a different type of response to environmental sounds (like that of vehicles, birds, and so on) and human voice? Does the child show awareness when the sound starts or stops?

  After knowing the sounds that interest the child and her present level of listening skills, you can plan activities for auditory training.

- **Keep the atmosphere relaxed during training**

  Do not force the child to attend to a sound, but draw her attention to the sounds in the environment without pressurizing her. This will make listening a pleasant experience. Reward her every time she gives a correct response.

- **Repeat the activities in different settings to give the child a variety of experiences**

  Present the same sounds in a variety of situations. The same sound can have a different meaning in different situations. The sound of a car horn at the gate when the child is at home would mean that somebody has come and the door of the house needs to be opened, whereas the same car horn on the road would mean that a vehicle is approaching and she has to move to the side of the road to be safe.

10.3.3 Activities for Auditory Training

a) For birth to three years

Activity 1

The visually impaired child's first experience of sound will be her response to mother's voice. Talk to baby before touching the child. Observe if the baby responds to your voice by turning to the location where sound comes from, or making movements.

Activity 2

While touching the infant, bring the child's hand to your face and let the child explore your face. While talking to your child, move your face from side to side so that the infant will be able to locate the sound source – i.e. which side the sound comes from.

Activity 3

Give the child a variety of rattles and sound making toys and let the child explore the variety in sound.

Activity 4

Clap your hands, knock on the table or sound two pieces of wood together in a particular rhythm – such a two claps – gap – two claps; or two claps — gap– one clap — gap – two claps. Ask the child to repeat the same pattern. This activity will help her to remember sounds and their rhythm pattern.

b) For preschoolers

Activity 5

Use a toy or an object to make a sound. Keep this sound source stationary. Ask the person to point in the direction of the sound source and turn her face towards it.

Activity 6

Use a sound making toy that moves. Ask the child to tell you if the toy is coming towards or moving away from her. This will strengthen her ability to locate the direction of the sound. You may also ask her to walk and follow the sound.

Activity 7

Bounce a ball on the floor. Ask the child to count the number of times she hears the ball bounce. This will foster the ability to select a particular sound among many others in the environment and learn to localize it.

Activity 8

Clap your hands, knock on the table or sound two pieces of wood together in a particular rhythm. Ask the child to repeat the same pattern. This activity will help her to remember sounds and their rhythm pattern.

Activity 9

Use a sound that can be changed in terms of its volume (for example, sing a song/ rhyme or use a radio/tape recorder). Ask the child to stand up if the sound becomes loud and to sit down if the sound becomes soft. You can ask her to respond in a variety of ways to express her grasp of the difference between loud and soft sounds. For example, , she can spread her arms as the sound becomes louder, and bring the arms together as it becomes softer, or relax when there is soft music and dance when there is a loud one.

Activity 10

Explain to the child that silence has a special quality about it and that one can hear sounds when everyone is quiet. Ask her to attend to what she hears when no one is speaking. Can she hear the clock; the sound of dry leaves; her own breathing; the passing car or the footsteps of cattle on the road?

Activity 11

Let the child explore the variety in sound with easy-to-make rattles or sound shakers. Take some plastic bottles or containers with covers or caps. Fill the containers with varying amounts of different materials, which will make a sound, such as dry seeds, uncooked beans, rice, pebbles or sand. Fix back the cover/ cap and shake the container. Let the child compare the sounds made by the different materials. You can also playa guessing game with these sound shakers — have the child guess what is inside the sound shaker by listening to the type of sound it makes.

Rice *Sand* *Stones* *Buttons*

Sound shakers

Activity 12

Stand on the pavement with the child and orient her to the sounds of vehicles that are passing.

Activity 13

Make a ‘sound tape’ with different sounds recorded on it, such as the sounds of different animals, birds and vehicles. Let the child listen to the tape and identify each sound. When the child is somewhat familiar with sounds, take her for a walk. Ask her to identify and point towards all sounds she hears.

This activity will help the child to be aware of, identify and localize sounds.

Activity 14

Let the child sit in the middle of the room. Have the other family members/ friends form a circle around her, about 10-20 feet away. Point to one of the persons in the circle and ask this person to say something. The child has to identify the person, as well as point towards the direction in which the person is sitting. You may repeat the activity by decreasing/increasing the distance between the person and the child.

You could also take the child to a place where some activities are happening and where there are several people, for example, take her near the village well, or to the neighbourhood playground. Ask her to identify one particular sound from all the sounds, such as the voice of a friend in the playground or the sound of the ball being caught. This will help to develop the ability of identifying a particular sound in a background of many different sounds.

Activity 15

Make sound using an object and ask the person to name the object which is being used to make the sound. Examples of sounds that can be made are: shaking coins; clapping hands; tapping a blackboard duster, a pencil or pen on a table; closing a book with a snap; crumpling up paper or a foil; jumping on the floor; tearing paper; bouncing a ball, dropping a spoon, filling water in a bucket. You can also combine two or three objects, make sounds using each one after the other and see if the person can identify one particular sound in the combination – for example, ask the child which object was used to make the second sound in the series.

Activity 16

This activity helps the person to identify similar sounds by matching them. Fill pairs of containers with similar material. For example, you could fill two containers with sugar, two others with a few coins and another two with beads/buttons.

Place one set of containers near the person, while each family member may pickup one container from the other set. Ask the person to pick up one container from her side, shake it to hear the sound it makes and find the person whose container makes the same sound as her.

Activity 17

Stand on the pavement with the person and orient her to the sounds of vehicles that are passing. Then ask her to identify the sound of a particular vehicle and indicate the direction in which it is moving. This will help her to identify and localize sounds.

Activity 18

Use a sound toy that moves. Ask the child to tell you if the sound source is coming towards or moving away from her. Ask her to locate the direction of the sound. You may also ask her to walk and follow the sound.

The above activity can be modified. You can clap and ask the child to move towards you. Change your direction and repeat the activity.

Activity 19

This activity requires participation of family members or friends. It is a modified game of chase. Ask the child to chase the other players on the basis of their voices. To begin the game and to locate the players, the child asks, "Should I come?," and the other players respond by saying, "Come". Using this as a clue, the child tries to catch someone. A person who is now tagged (caught) becomes the new catcher.

Check Your Progress Exercise 1

1) Enlist the sense organs.

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2) What is sensory training?

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3) Explain the use of Auditory Training for children with visual impairment in your own words.

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4) What are some examples of activities for auditory training?

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5) Fill in the blanks with appropriate words:

   i) Sensory training focuses on developing the ……. senses of individuals with disabilities to compensate for impaired senses, such as vision in the case of visual impairment.

   ii) Auditory training, also known as …… training, is crucial for individuals with visual impairment to develop good listening skills and understand their environment primarily through sound.

iii) Auditory training helps individuals with visual impairment to …… sounds, understand their meanings, and locate their sources in order to navigate and interact effectively in their surroundings.

iv) Activities for auditory training include using sound-making toys, listening to recorded tapes with various sounds, and participating in games that help in ……. and understanding different sounds.

v) Sensory training should ideally start …….., as early identification of vision loss allows for optimal development of remaining senses during crucial developmental years.

10.4 SENSE OF TOUCH

The sense of touch, or the tactual sense, is located in the skin. Some sections of the skin are more sensitive than others. You must have noticed that it is easy to burn your tongue when you eat something hot. In fact, lips, face, mouth, tongue, hands and soles of the feet are more sensitive than other body parts, and can be used for tactual training.

Using Hand-under Hand Touch for Guiding Tactual Exploration

The hands of the child with visual impairment are precious. Like eyes are valuable to a sighted child, hands are vital for infants with visual impairment to explore and make sense of the world around. **Hand-under hand touch or hand- under hand interaction means placing our hand under the hands of the child and guiding the child for tactile exploration.** The parent or the care giver places her hand under the hand of the child to explore an object (a cup, bowl or a play item). She can also place her hand under the child's hand and gently guide to explore her face. Let the child to explore the nose, mouth, ears etc. In this manner, the parents/ caregivers/teachers can help the child explore the objects and the surroundings. Hand-under hand exploration will help learning and development of a child who is visually impaired.

10.4.1 Uses of Tactual Training

We all use the sense of touch to determine the features of an object and form a concept about it. For the sighted, vision supplements the sense of touch and gradually overpowers it. Thus, initially the sighted child learns by seeing and touching the object. For example, she touches wool, silk and wire-netting. She finds them vastly different and repeats the activity. Gradually, even without touching them, she can identify different textures based on her sense of vision. However, **for persons with visual impairment, touch remains a primary means of getting concrete and exact knowledge about the world around.**

1) **The sense of touch helps in cognitive development** by enabling the person with visual impairment to form concepts. She gets information about aspects like the shape, size, weight, hardness, softness, texture and temperature through tactually exploring the objects. It helps her to identify objects and know their characteristic features. For example, if a

child hears a description of a cat but never touches a cat, she may not have a real idea of what a cat is, If with the verbal description, she is able to feel a cat (make sure that the cat is a pet and will not snap at the child), then she will have a more realistic idea of it is like, she will know the proportions of the different parts of the cat's body and can also feel the softness of the fur.

2) **The sense of touch helps in orientation and mobility** as it helps to identify physical landmarks such as trees, fences and obstacles by touching them and helps the peronto know herposition. Trailing an object (following an object using, theback of the hand), enables the person to move. The hands also provide information about the layout of the environment through exploring tactile maps, models, embossed diagrams and relief maps. The person can also determine through her feet the kind of surface she is walking on - whether it is grassy, wet, sandy, concrete, sloping or bumpy. This helps her to understand about the kind of land, its geographical features and climactic conditions.

3) A well-developed sense **of touch helps the person to learn to read and write braille.** You will read more about learning braille in Unit 12.

4) **The sense of touch provides information about the environment** as is clear from each of the above three points. To take another example, our entire body provides us information about temperature. For example, it is possible to know the position of the sun by the part of the body which feels hot. The relative position can be understood by a change from the shade to a sunny area. This is known as kinesthetic sense. The body also helps us to interpret environmental information like heat, cold, rain and breeze.

5) A well-developed **sense of touch is also essential to independently carry out activities of daily** living such as eating, bathing, dressing and so on. You will read about these in Unit 8.

When to begin Tactual Training

Now, the question may arise as to when should a child start exploring tactually? And where? Well, even newborns respond to touch. Therefore, **while the child is still a baby, she should be given opportunities to start exploring the world around her tactually.** You can encourage the child to feel the different objects around the home or in the neighbourhood: The most basic level of tactual training is awareness. A child must be curious to find out about difference in objects and should have the motivation to explore their shapes, size and textures; she should have the motivation (desire) to explore. With sighted children, visual appearance of objects is a motivating factor. However, this motivating factor can be compensated for by providing the child with vision loss with a variety of materials to hold, rub, probe and manipulate.

Following are some of the activities that can be helpful in tactual training.

10.4.2 Activities for Tactual Training

The activities described below will help the child to tactually discriminate between big-small, rough-smooth, soft-hard, heavy-light. She will understand about various shapes and the activities will also help in fostering fine motor coordination. This will help in acquiring daily living skills. She will also develop a variety of concepts and so the activities will also help in cognitive development.

a) For birth to three years

Activity 20

In the beginning, the child may not be able to feel a whole object in a systematic way. She might explore only a part of it, leading to an incomplete understanding. Give as many objects as possible to the child and encourage her to explore these with both hands, probing the details with the fingers.

Activity 21

Give small objects like ball, rings, flowers, toys, fruits and vegetables to the child and encourage her to grasp and hold them.

b) For preschoolers

Activity 22

Giving the child different items to hold like a ripe banana and a potato will help the child to understand that each item/material requires a different pressure for holding it and handling different materials will also foster her fine motor coordination.

Activity 23

Ask the child to fill empty plastic cups or bowls with sand/water/beads/ button/ seeds. During the activity, the child will be able to know about the texture, weight and shape of all these materials. Ask her to make a 'ball' or a 'cake' with sand. You can also encourage her to experiment with putting a variety of objects such as plastic toys, leaves and pebbles, in a tub filled with water.

Water Play

Activity 24

Make different shapes using materials of different textures such as wood, cloth, paper and sandpaper. Give these to the child to explore using her hands. She will learn to identify textures and shapes as well.

Activity 25

When the child is older, let her help in some of the kitchen tasks, like washing vegetables or rinsing cups. If proper precautions are taken, the kitchen becomes a learning environment and the child learns many new principles. For example, she will learn how to stack vegetable by taking into account their hardness and size.

Activity 26

Give objects like apple, sand paper, ice, a sun-warmed piece of a metal and ask the child how they feel. Give a name to the quality such as hot, cold, rough and smooth.

Activity 27

Encourage the child to do activities that require fine motor coordination such as putting pegs into a pegboard. This will help her to be better coordinated.

Putting pegs in a pegboard

Activity 28

Sorting coins and kidney beans (‘rajmah’)

Let the child identify and sort different objects like stones, leaves, sticks, seeds, coins and other such materials on the basis of size, shape, texture and weight. For instance, ask the child to put big objects in one box and small objects in another or sort peanuts in one bowl and walnuts in another.

The above activity helps the child to sort two different materials. Gradually, the child can be oriented to sorting more than two materials, or put the objects in order — from the biggest to the smallest, heaviest to the lightest and so on.

Activity 29

Cut chart paper into medium sized square pieces. Paste materials of different textures on these cards — there should be two cards with the same material. You can use materials like sand paper, buttons, sponge, fur, leather, velvet, match sticks and so on. Mix the cards and ask the child to identify similar cards. This activity will help the child to feel and identify the material, match the textures, sort them and learn concepts.

Activity 30

Place three or more objects, depending upon the age of the child, on the table. For example, take a box, a bag and a book. Let the child feel them and describe them. Then take one object away and ask the child to feel the two remaining objects and identify the one which is missing.

Activity 31

Blocks are very good for children to play with. The child can be oriented to make 'houses', 'railway track', 'tower' and 'road' out of the blocks available. If blocks are not available, you can use old matchboxes or even gift boxes.

Block Play

Activity 32

To help the child develop of an idea of weight, you can do the following activity.

Take two identical containers with same amount of water. Ask the child to hold one container in each hand and feel the weight. Are they the same?

Take the containers from the child, add water to one of the containers and ask the child to now feel their weight, and tell you what she notices. This activity can also be done with books of different sizes.

Activity 33

Put different objects such as a pencil, rubber, scale, sponge, leaves, sticks, beads, pebbles, stones, and flowers in a bag and have the child:

- identify all the objects in the bag by touching them,
- find the object similar to the one you have in your hand.
- Count the objects
- Sort the objects which are similar/dissimilar.

Activity 34

When walking with a person with visual impairment, help her to identify the kind of surface she is walking on. Tell her where the surface changes with respect to texture as well as level. Ask her to touch and explore physical landmarks such as a fence, pole or gate to make sure that she can find and identify these landmarks later when she is by herself.

Activity 35

Take the child out in the morning, in the afternoon and in the evening to feel the position of the sun, the cold/warmth and the difference in temperature at different places. Such differences should also be pointed out to the child during different seasons of the year.

Check Your Progress Exercise 2

1) How does tactile training benefit overall quality of life for individuals with visual impairment?

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2) State whether the following statements are correct or incorrect.

   i) Turning towards the direction of sound helps to develop the child's sense of touch.

   ii) Hand-under hand touch involves placing the caregiver's hand over the child's hand to guide tactile exploration.

   iii) Sense of hearing is more useful in developing an idea of shape and size of objects as compared to sense of touch.

iv) Activities for tactual training can include exploring tactile maps and embossed diagrams.

v) Tactual training should start only after a child reaches preschool age.

10.5 SUMMING UP

Auditory training is crucial for individuals with visual impairments to compensate for the loss of sight by refining their sense of hearing. It involves activities aimed at improving listening skills, sound discrimination, localization, and understanding voice characteristics. These skills are essential for orientation, social interaction, and daily living activities.

Tactual training focuses on utilizing the sense of touch to explore and understand the physical environment. It aids in cognitive development, orientation, and mobility by helping individuals identify textures, shapes, temperatures, and other tactile cues. This training is fundamental for learning Braille, navigating surroundings, and performing daily tasks independently.

As a parent or a teacher, you playa crucial role in fostering the optimal development of the person with visual impairment. Apart from carrying out the activities described in this Block yourself with the person with disability, you can-also provide information regarding these to others you come in contact with. In this way, you will contribute towards promoting positive practices and bringing about social change.

10.6 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) The sense organs are given below:
   a) Sense of hearing
   b) Sense of touch
   c) Sense of smell
   d) Sense of taste
   e) Sense of vision

2) Sensory training refers to the training of the remaining senses so as to make them as efficient as possible, since they must provide information that will substitute partially for lack of vision. Sensory training stimulation and learning to make optimal use of the
   - Sense of hearing
   - Sense of touch
   - Sense of smell
   - Sense of taste
   - Residual vision

3) Auditory training is useful for children with visual impairment for their orientation and mobility, in developing concepts and enables them to

carry out activities of daily living successfully. It enables them to use many aids and appliances which use sound as a means of giving information about the environment.

4) Activities include sound discrimination exercises, learning to localize sounds, understanding voice modulation, and identifying environmental sounds like vehicles and animals. These activities help individuals with visual impairment to interpret auditory cues effectively and develop an understanding of her environment.

5) i) Remaining (intact); ii) Listening; iii) discriminate**;** iv) identifying; v) Early

Check Your Progress Exercise 2

1) For children with visual impairment sense of touch is the primary means of getting concrete and exact knowledge about the world around. This helps in cognitive development. By refining the tactile sense, you can support the child in orientation and mobility which helps her to navigate environments confidently which enhances her sense of independence and safety. Sense of touch enables the child to participate actively in educational activities by enabling her to read and write Braille. It empowers the child to perform tasks of daily living efficiently.

2) i) Incorrect. Turning towards the direction of sound helps to develop the child's sense of hearing.

   ii) Incorrect. Hand-under hand touch means placing the caregiver's hand under the child's hand to guide tactile exploration.

   iii) Incorrect. Sense of touch is more useful in developing an idea of shape and size of objects as compared to sense of hearing.

   iv) Correct. Tactual training involves activities such as exploring tactile maps, models, embossed diagrams, and relief maps.

   v) Incorrect. Tactual training can begin as early as infancy, allowing the child to explore the world through touch from a very young age.

UNIT 11 SENSORY TRAINING: SMELL, TASTE AND RESIDUAL VISION

Structure

11.1 INTRODUCTION

In the last Unit, you have read that it is important to provide sensory training to enable the child to use her senses of hearing and touch to effectively learn about the world around her. In this Unit, we will focus on the sense of taste and smell. In case of persons with intact vision, sight dominates the other senses and we do not realize how much information the senses of taste and smell provide us about the environment. In case of children with visual impairment these senses provide vital information and must be adequately stimulated and trained.

Objectives

After reading this Unit, you will be able to:

- explain the importance of senses of smell and taste and how these senses support a child with visual impairment; and
- plan and conduct activities to strengthen the use of senses of smell and taste as well as residual vision during infancy and childhood.

11.2 SENSE OF SMELL AND TASTE

The sense of smell and the sense of taste are quite well-developed at birth. Breastfed babies appear to be able to recognize the smell of the mother's breast as early as the first week. Similarly, research indicates that newborns prefer sweet things more than other tastes. Even one-day-old babies give facial expressions that indicate rejection on smelling fish/ rotten egg.

Providing training to develop the sense of smell involves training the person to:

– be aware of the variety of smells

– identify and discriminate among smells
– identify the location of the smell

Sensory training for developing the sense of taste involves training the person to:

– be aware of different kinds of taste
– identify foods by their taste.

11.2.1 Uses of Training the Senses of Smell and Taste

1) **The sense of smell provides the person with useful information about the surroundings**. She can learn to identify different items on the basis of their smell.
2) The sense of smell is **useful for orientation and mobility** — both in the house and outside. Different kinds of stores, shops and factories have different smells and can be identified by their odour — the bakery, the chemist shop, the roadside vendor, the petrol station, a leather industry, a garment dyeing factory are all easily identified by their smell. All these will serve as clues for the person to orient herself. Flowers and trees can sometimes be smelled from a distance, giving the person a clue about where she is located. Smell from the kitchen or dining room is useful for orientation within the house.

   Through smell, one can establish the presence of particular animals in the vicinity. Typical odour from open drains can be used as landmarks for mobility — a strong aversive smell that keeps increasing indicates that the person is approaching a drain. Sense of smell is useful for understanding one's relative position in an agricultural or a dairy farm or a garden.
3) The sense of smell can also be helpful in **avoiding mishaps** — the smell of gas in the kitchen gives indication of leakage.
4) The sense of smell as well as the sense of taste are **helpful in carrying out activities of daily living** such as cooking, eating and bathing. In fact, these could help the person to protect herself from eating a spoilt food item.
5) Since the child comes to know about the objects and things present in her environment through the senses of smell and taste and also learn to identify and name them, **these senses help in developing concepts and language.**

11.2.2 Activities to Develop the Senses of Smell and Taste

a) For birth to three years

Activity 1

For the first two years, the everyday experiences provide lot of exposure to various smells and food items with different tastes. Help the child to associate specific food items with their taste and smell. Use the words like 'sweet', 'salty', or 'sour' so that the child develops these concepts.

b) For preschoolers

Activity 2

Orient the child to identifying food items and some household items using only her sense of smell. For example, make the child aware of the smell of the following: onion, oranges, pineapple, coriander leaves, fish, meat, lemon, banana, vinegar, ginger, chocolate, garlic, coffee, and a variety of other food items, oil, kerosene, soap, flowers, perfume and incense.

Activity 3

Take the child to visit markets, hotels, stores, bakery, and, if possible, a nearby chemical factory to familiarize her with the typical smell of these places.

Activity 4

When the child eats something, ask her to describe its taste. Teach her the taste of different food items such as bitter, salty, sweet, savoury and sour.

Activity 5

You may also teach the person to determine the condition of foods by their smell and taste, such as fresh and spoiled fruits and vegetables, clean and polluted water.

Activity 6

Take the child to a park/garden and orient her to the different smells of common flowers and trees. Teach her to identify these by their smell. This would be helpful for her when she moves around in the neighbourhood.

Encouraging the child to explore

Activity 7

Collect pairs of items that have a smell and then place them in containers. Have two containers for each item. Mix up the containers and ask the child to identify the containers that have the same item, using her sense of smell. The items can be lemon, orange peel, mint, vinegar, chocolate, garlic, coffee and flowers.

Activity 8

To help the person identify the location of the smell, take her near a cafeteria or any other place, which has an identifiable smell. Have the person identify the smell and, if it is safe, walk towards it. This will help her to learn to locate the source of smell. This activity can even be done in the house. For instance, when coffee or 'sambhar' is being made, the person could be asked to walk towards the source.

With the help of a variety of activities, such as those described above, the parents, family members and teachers can help the person with visual impairment to identify the odours that she comes across. However, **the sense of smell has its own limitations that are as follows**:

1) Sense of smell may change with time and with change in circumstances. For instance, with a blocked nose the person will not be able to sense many smells. Also, when you are in an environment for a long period, you become used to that smell and do not remain so sensitive to it.
2) It is difficult to differentiate smells in crowded places, as too many smells are present in the environment. This may even create confusion.
3) The same smell may be coming from different directions and locations and this may be confusing.
4) The sense of smell cannot be used in isolation. It needs to be used in combination with other senses.

Check Your Progress Exercise 1

1) What is the role of sense of smell and taste in day-to-day life?

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2) State two limitation of using the sense of smell to develop an idea about the surroundings.

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11.3 RESIDUAL VISION

As you know, residual vision is any remaining vision that the person has. This vision can help her to carry out her day-to-day routine. It is very important to train the person to use her remaining vision. **It is a wrong belief that residual vision should not be used or that doing so will make the eyesight worse.**

You have studied about functional vision assessment and the various methods to improve it. To help you recall, the various stages in developing functional vision are summarized below:

1) **Visual Awareness**: This means helping the person become aware of things/ objects in the environment by looking at them.
2) **Visual Fixation**: This refers to the ability to look at an object and keep the eyes fixed on it — to 'see' the object.
3) **Visual Tracking**: This refers to the ability to follow a moving object at near and far distances.
4) **Changing focus**: Moving (shifting) the gaze from one object to another.
5) **Visual exploration**: This refers to searching for particular features of an object so as to locate it from among many objects.

For each of the steps above, the person needs to use distant vision as well as near vision, depending on the situation. Therefore, training of residual vision would also have to essentially involve activities to distant vision and near vision.

11.3.1 Activities to Enhance Light Stimulation (Vision Stimulation)

Children who have very little vision or have not used vision need to know that they can use their vision. They may also need encouragement do so.

When an infant has severe visual impairment, to help her to learn to see, stimulation must be strong and simple. Stimulation during the first month of life and certainly before age six is important for preventing visual deprivation. The presentation of visually interesting stimulus items will motivate a child to become visually attentive. The following materials can be used as stimulus:

Play Materials

Toys are more effective for vision stimulation because they are more interesting and easy to use. Many usual playthings are useful. Contrast can be enhanced by adding colours to the surfaces of the play items if the finish is dull.

Bottle with Stripes

Bottles with bright stripes on white background attract the infant to look. Pouring some water in the bottle creates sound and gives the child another source of information (auditory), and may attract the child to look at farther distances. By using different yarns on the surface of the bottle you can give it

different tactile qualities. Tactile information will be compensatory (additional) source of information. This sense (other source of information) can be trained together with the use of vision.

Shiny Objects

Shiny surfaces that reflect light are strong stimuli for grasping. Plastic balls covered with shiny papers, shiny papers, shiny rattles etc., which have both visual and auditory stimulation can be used to attract the child and stimulate vision.

String of Beads

The string of beads can be kept in a holder. When the string is brought closer to the child's face, the child can grasp it easily. The movement of the beads, its soft sound and the various colours of the beads will be an effective activator in early stimulation.

Illuminated Toys

Illuminated toys and fluorescent ball that glows in a dimly lit room will activate the infant with visual impairment.

Flickering Lights

While nothing else seems to work, one may try to use flickering lights at close distance. Because of flicker, the toy with flickering lights can be used by many children with very limited residual vision. The child expresses for the first time the joy of seeing light.

A) Activities for Fixating On/Localizing the Source of Light

To improve the child's ability to look at and find a source of light (i.e. to strengthen the ability of fixation), start the given activities in a dark room, so that the child is able to focus the attention on the light. After some time, try the activities in a room which is dimly lit, then in a room with normal light.

Activity 9

Flicker torch light in front of the child. When the child is able to look at the torch light, try shining the Light on to the child's hands and feet. She should be able to identify where the patch of light is falling. Encourage the child to focus on the patch of light. Later you can use coloured lights. You can cover the torch with different coloued papers each time and shine the torch. A different coloured patch will form which the child has to identify.

Bicycle reflectors are the easily available source of bright light and these can be made interesting by using different coloured gloss papers.

Activity 10

To increase the complexity and improve the ability to localize the source of light, shine a colored torch towards the child from different directions and angles. Ask the child to look towards where the patch of light falls. Keep talking to the child when you are doing the above activity. Encourage the child each time she attempts to locate the light patch. This will help the child to better understand the direction from which the light is coming.

Activity 11

When carrying the child inside the room switch on the light and ask the child to look up towards the light source.

Activity 12

Allow the child to play in the darkness. Suddenly pull the curtains apart and ask the child from which direction the light is coming from.

B) Activities for Tracking the Source of Light

To improve tracking, all the activities related to focusing/ fixating on light can be modified so that the child learns to track.

Activity 13

When the child is able to fix her vision on the beam of torchlight falling on the wall, then SLOWLY move the light horizontally from left to right. Then move it vertically – up and down. Encourage the child to follow the movement of the light.

Activity 14

Another way to encourage tracking can be to fix a row of serial lamps that glow one after the other to the window sill (or any other place) . Encourage the child to track the light as the lamps glow one after the other.

Activity 15

Slide toy car with fluorescent lights and sound system on the floor. The light will stimulate the child to follow the toy.

Activity 16

Make bubbles out of soap water and encourage the child to catch the bubbles. She will have to track and follow the bubbles in order to catch these. This activity is best performed in day light as the bubble reflects the light.

Activity 17

Another interesting activity is to hang the disco ball with elastic and shine a bright beam of light on to the ball so that the child is able to follow the direction of the ball.

Activity 18

To improve shift gaze**,** switch off the light in the room and shine a torch near your face. Then switch off the torch and switch on the light in the room is. Keep repeating the activity so that child will learn to anticipate (expect) stimuli alternately and keep shifting her gaze from one to another.

11.3.2 Activities to Enhance Distant Vision

As you have read in Unit 1 of this Course BCD - 103, distant vision is the ability to look for far-off objects. This vision is important to locate things from a distance — for instance, a bag kept on a table at the other end of a hall. Distant vision is also required to detect figure-ground distances (ability

to understand that out of the two objects, which is in foreground and which is in background), understanding visual edges in flooring and between floor and walls, as well as to understand directions. Distant vision is thus helpful in mobility.

Some people may be able to identify distant objects, yet have poor mobility skills because they do not know how to use their vision for moving around. They can see, but they do not know how to interpret what they are seeing and so find it difficult to orient themselves. The following activities can be used to train the person to use her distant vision more effectively:

Activity 19

Ask the person to stand in the middle of the room. Place a yellow coloured object (or any bright coloured object) somewhere in the room. Ask the person to turn slowly, look for that object and then point to it. Vary the distance of the object till the person is able to see it. The distance from where the person can see the object would depend upon the size of the object as well as the extent of residual vision.

Activity 20

Place 10 plastic cups on the table and have the person count them. Then instruct her to move back until the cups are just within the range of her vision. Put other objects on the table, such as books and pencil boxes randomly along with the cups, taking away or adding one or two cups. Ask the person to now count the number of cups standing where she is.

Activity 21

Ask the child to walk around the room and touch all the green coloured objects; count all objects that are round/square in shape; and so on. Of course, you will need to keep such objects in the room before you ask her to do this activity.

Activity 22

The child needs to learn to use her vision not only inside a room but also in open places. Teach her to develop systematic scanning techniques in open areas (i.e., to look around her in a systematic way). You can carry out the following activity for this purpose:

Ask the person to stand in an open area outdoors, tell her to close her eyes and then place an object such as a big ball or a basket or a bag somewhere in the area where there are some other objects as well. Ask her to open her eyes and find the object.

You can take the person to a park or a market place and ask her to stand at a distance where she is best able to see. Then ask her to describe what she is seeing.

Teach the person the general location of where certain objects will be found such as road signs, wall clocks, television, door handles, calendars and so on.

11.3.3 Activities to Enhance Near Vision

As you know, near vision is the ability to look at objects that are close to the eyes. Generally, it is used for reading and writing. Many children with visual impairment have enough residual vision to read either normal or large print.

However, due to lack of proper training for near vision, often these children are forced to learn braille, which is not correct. The following are some of the activities which can be carried out with children to improve their near vision.

Activity 23

Ask the child to colour pictures. If the child cannot see the outline of the picture, darken the lines with a black felt tip pen.

Activity 24

Make vision stimulation cards or worksheets for the child. These cards or worksheets contain those activities which will help the child to use her near vision more efficiently. There are four stages which are followed in devising such cards.

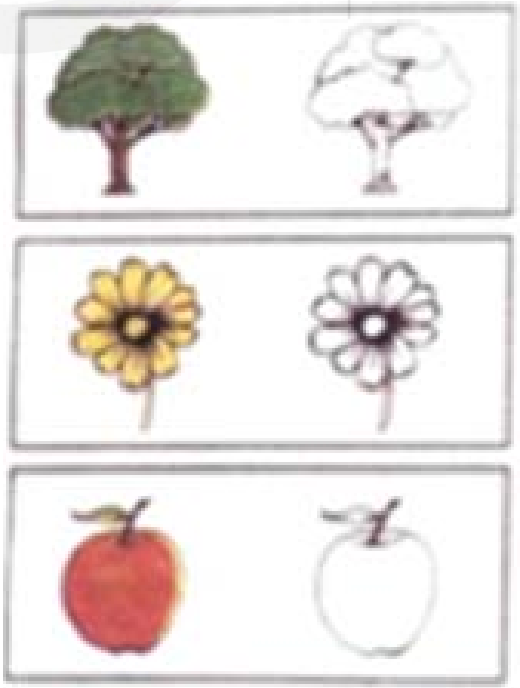
Stage 1: Discrimination and recognition of geometric shapes in solid black line drawings.

Draw various shapes (square, circle, triangle etc.) on cards. These cards can be used to ask the child to

- Identify and name the shapes
- Match similar shapes — for instance, put the big squares in one pile and small squares shapes in another. You may also ask her to keep all square shapes in one pile and rectangles in another.
- Sort out shapes on the basis of their size or arrange any particular shape in order of size — for example, arranging the circles from biggest to smallest.

Stage 2: Discrimination and recognition of objects.

Draw objects, for example trees, fruits and flowers, on cards such that there are two cards for each object. Colour one object from the pair and let the other be in the form of a line drawing. Have the child identify and match the cards.



Stage 3: Discrimination and recognition of

– An individual object from a group of objects

Draw different objects on a card such as a dog, an apple, a tree, a house and a cup. Ask the child to identify a particular object, such as the tree.

– Similarities and differences among objects

– Draw a card with three dogs facing one direction and one dog facing the other direction. Ask the child to identify the dog that is different.

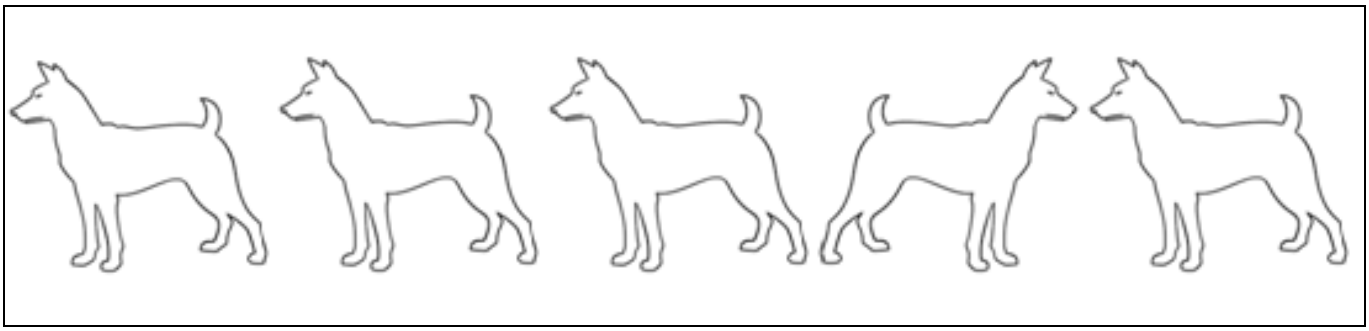


Figure-ground discrimination

— Figure-ground discrimination

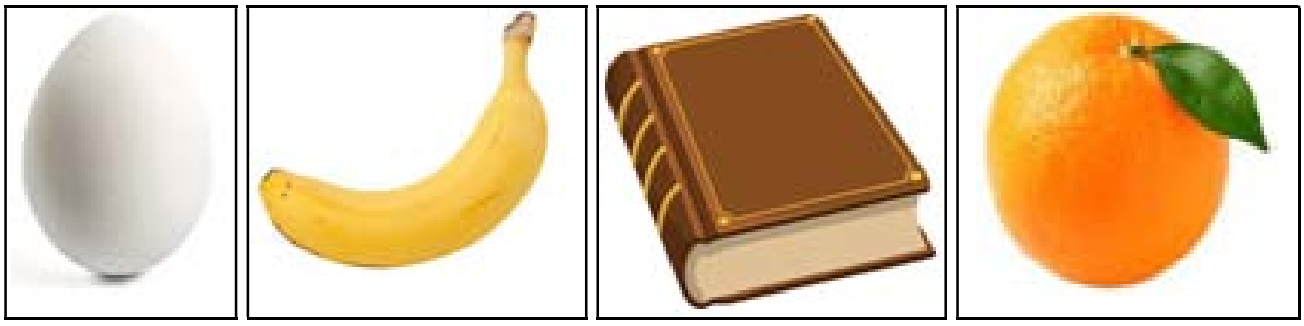
Give the child a picture with two or three objects in it. Ask the child to colour a particular object from this picture. You can use pictures from newspapers and magazines for this purpose. Remember that the picture must be clear.

— Letter symbols

Make flash cards with the letters of the alphabet. Instruct the child to identify the individual letter on the card.

Stage 4: Recognition of words and pictures

Make flashcards and draw the pictures of various foods and objects such as an egg, a banana, a book and an orange. Also make flash cards with names of these foods and objects. Have the child match the word card with the picture card (refer to illustration).



EGG	BANANA	BOOK	ORANGE

Matching picture cards and word cards

Check Your Progress Exercise 2

1) List the various stages in developing functional vision.

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2) Suggest two activities for the children with visual impairment to use their residual vision?

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11.4 SUMMING UP

In this Unit, you have read that sensory training is the training of the senses, including residual vision, so that they can be used as efficiently as possible and can provide compensation for the loss of sight. Sensory training helps in developing concepts and language and enables the person in social interactions.

This Unit has focused on the sense of smell and taste. The sense of smell and taste provide the child with useful information about her surrounding and promotes orientation and mobility, helps the person in performing activities of daily living and can prevent various mishaps from happening.

Many people with visual impairment have residual vision and they need training to help them use this effectively. The person needs to be trained to be able to localize the source of light and track it as well as use sight for near and distant vision. For distant vision, the person can be trained to develop selective viewing and systematic way of scanning the environment — this helps to know the general location where certain objects will be found. Near vision is used for reading and writing and the above skills can be utilized for this also.

As a parent or a teacher, you play a crucial role in fostering the optimal development of the person with visual impairment. Apart from carrying out the activities described in this Block yourself with the person with disability, you can also provide information regarding these to others you come in contact with. In this way, you will contribute towards promoting positive practices and bringing about social change.

11.5 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) Sense of taste and smell play a great role in our day-to-day life. These senses help to know about the various things around us and helps in cognitive and language development. These also helps in orientation and mobility and in activities like eating, bathing, dressing and so on.

   Sense of smell also helps in identifying various objects and places. It helps in cooking, eating and identifying fresh food items. Through sense of smell one can identify dirty linen from the fresh ones.

2) a) It is difficult to differentiate smells in crowded places as too many smells are present in the environment. This can create confusion.

   b) The same smell may be coming from different directions and locations and this may be confusing.

Check Your Progress Exercise 2

1) The stages involved are: Visual Awareness, Visual Fixation, Visual tracking, Changing focus, Visual exploration

2) You can suggest activities or near vision and far vision as described in the text.

UNIT 12 THE NATURE OF CONCEPT DEVELOPMENT

Structure

12.1 INTRODUCTION

You must have heard children saying, "I want the drink in a big glass", or asking questions like "Why does it rain?" "Why did the clay become hard when we put it in the sun?" Their statements, observations and questions at times amaze us and we wonder how they form an idea about events, situations, people and objects. One might say "by seeing", since the child seems to be observing her environment to form an idea about it. Therefore, we tend to think that vision has a central role in enabling us to understand the world. But what about people with loss of vision? Do they not develop concepts and ideas about things around them? They do! How do they do so? Is the process the same or different in the case of the sighted and those without sight? What can be done to foster cognitive development?

You have read about the meaning of cognitive development and concepts, the process of development of concepts and the impact of visual impairment on the process of concept development in Units 7 and 8 of Course 2 (BCD-102). In this Unit, we will recall this discussion briefly and we will also describe specific activities that you can carry out with children during the early childhood years (birth to six years).

Objectives

After studying this Unit, you will be able to:

- explain what is meant by 'cognitive development' and 'concepts';
- describe the process of developing concepts in children with visual impairment;
- state the stages in the development of concepts;
- explain how lack of vision places a limitation in the development of concepts; and
- explain the method of developing concepts in children with visual impairment.

12.2 DEVELOPING CONCEPTS

You have read in Unit 7 of Course 2 (BCD -102) that concept formation is the foundation of everything that we learn. **Forming a concept means to form an idea about objects, things, events and people so that one has a mental idea of what they look like, what they are similar to or different from, and what their characteristics are.** A concept is formed by identifying common aspects among things, events, people and situations, which are otherwise dissimilar. Thus, a concept represents some common features of a group of different objects or events. For example, for a child, a tiger cub, a tadpole and a chick are different from each other and appear unrelated. However, what is common to all of them is that they are young ones of a species. Thus the concept 'young ones of a species' unifies a child, a tiger cub, a tadpole and a chick.

We all have the ability to form concepts due to thinking capabilities within us. These thinking capabilities develop and change as we grow. The process of emergence and development of thinking capabilities in an individual right from the time that the person is born is referred to as **cognitive development**. Cognitive development is also referred to as **'mental development'.**

We develop concepts in our day-to-day life as we come across objects and interact with people. We have concepts of big-small, animals-birds, rich-poor, living-non living, time, food and our body as well as concepts related to social and emotional relationships such as friendship, love, justice and beauty. **Thus, concepts can range from concrete (such as colours and size), which we can see, to abstract (such as love, happiness and dislike) which can only be felt. Concepts help us in understanding things, people, and events around us.**

Children begin to form concepts from the moment they begin interacting with their environment. The more concepts a person has, the greater is the person's her understanding of the things, people and events around her/him. Learning of concepts in day-to-day life is vital for the individual to interact with the world.

Experiencing something through our senses of touch, hearing, sight, smell and taste is the starting point of the process of concept formation. On the basis of our perceptions, we form mental images of things, persons or events. The mind then analyses and ascertains what are the similarities and common features among these objects, events, people and situations. After making such observations a number of times, we are able to form a general idea about the common properties. In other words, we form a concept.

Let us take an example to understand this process. *A child perceives a white horse for the first time and she is told that it is a horse. She tries to form an idea about it. In the beginning, the idea is very specific in nature and the child relates the term 'horse' to that particular horse which she has seen. Later on when she sees a black or a brown horse, she does not call it a 'horse' at once. She asks again and comes to know that these are also horses. She compares the image of the 'horse' she is seeing now, with the image in*

her memory of the 'horse' she had seen earlier. By doing so, she is able to gradually identify the characteristics that 'horses' have in common. Thus, she is able to understand that an animal with certain features is a 'horse', even though the horses may vary in terms of colour, size and strength. She begins to differentiate horses from other types of animals. In other words, she now begins to use the word 'horse' for a general class of animals on the basis of the common properties found in the different 'horses', and now she can easily recognize an animal called 'horse' and understand it as being different from other animals. She now has a concept of 'horse'.

Experiencing something through any of the five senses is the first step in forming concepts.

12.3 CONCEPT DEVELOPMENT IN CHILDREN WITH VISUAL IMPAIRMENT

How does the child with visual impairment form an idea about objects, people and events? You have read about these in Unit 7 of Course 2 (BCD – 102). We will again read about these aspects in this Section.

The process of development of concepts in the children with visual impairment takes place in the same manner as described above for sighted children. The difference is that the children with visual impairment form an idea on the basis of their other senses like smell, touch, hearing and taste, while the sighted primarily rely on the sense of vision. Vision is the major mode of acquiring information about people, places, objects and events for the sighted. The child with visual impairment is at a disadvantage as she lives in the world of the sighted and has to make use of the concepts created by the sighted, even though she may not understand all of them completely. **Since the visually impaired children have to rely on other senses and cannot use their vision, this leads to the following three situations:**

- ✓ Children with visual impairment have difficulties in forming concepts.
- ✓ This difficulty can lead to delay in development of concepts. They tend to lag behind in development of concepts if they have not been provided with suitable and stimulating experiences.
- ✓ The concepts they form of specific objects, people and events will be different from the concepts formed by the sighted. The concepts they form may not be so clear.

A child with visual impairment due to loss of vision depends on the other senses for learning and developing concepts.

Let us understand why this may be so. You have read about the difference in using sense of vision and other senses in forming concepts in Unit 7 of Course 2 - BCD-102 . We will recall some of that discussion here as well as describe certain additional points which will help you to understand why lack of sense of vision leads to difficulty and delay in concept formation.

Visual loss imposes three basic limitations on children. These limitations include:

a) limitations in the range and variety of experiences

b) limitations in the ability to move about and

c) limitations in the ability to control the environment and oneself.

These limitations adversely affect the learning of children with visual impairment. Let us read how these limitations affects the process of learning.

a) Lack of vision limits the range and variety of experiences

Children with visual impairment who are born without sight or those who have lost their sight early in life must build up their conception of the world by the use of their remaining senses. In doing this, they rely on tactual (touch) and auditory perception (hearing) and kinesthetic experiences (movement). There is a vast difference between using the sense of sight, and the sense of touch and hearing to form concepts. Can you say what the difference is? Well, when we see something, we see the entire object, person, event or situation at once. Along with seeing it, we also receive additional information about it through our other senses. Thus, we receive a variety of information — all at the same time — and we form an integrated idea/concept about what we are seeing. What happens when a person has to primarily rely on the sense of touch and hearing to form concepts?

There are limitations in forming concepts on the basis of each of these senses as discussed further.

Limitations of Sense of Hearing to Support Concept Formation

Although auditory sense provides certain clues (information) regarding distance and direction (e.g.: how far a car is and in which direction it is coming from, based on the sound of its horn), it does not convey any specific ideas of objects as such (e.g.: sound does not tell us about the size or colour or shape of the car and how it looks like). The main importance of the sense of hearing to a child with visual impairment is to help in verbal communication and support in movement. Hearing, therefore, is of very limited value in acquiring concrete clues (specific clues) of an object for a blind child. A child with visual impairment who hears the chirping of a bird may know with accuracy from where the bird sound comes from, but her listening will not give her any idea of the shape of the bird's body, or of its size or its physical characteristics. It becomes very challenging for a learner who is blind to understand spatial qualities of objects without being provided with materials in form of models or embossed diagrams. Hence, for certain things, the understanding the child with visual impairment will form about the objects, events and people will be very different from that of a person with vision.

Limitations of Sense of Touch to Support Concept Formation

You may say that the child can form an idea about objects through touch and manipulation of objects (that is, through movement which involves

kinesthetic sense). However, even by using the sense of touch the child does not form a complete idea about an object. There are limitations due to the fact that tactual perception requires direct contact with the object to be observed and it is not always possible to touch and explore objects. There are certain objects that are inaccessible to touch, such as the clouds, sun or the moon or the clouds; some objects are dangerous to touch such as fire or a sharp knife; other objects are so large that they cannot be observed tactually such as mountain, rivers, or large buildings; objects that are too small cannot be observed by touch with any degree of accuracy, as is the case with the small animals like flies or ants; fragile or tender objects, such as butterflies, spider webs, or soap bubbles, cannot be tactually observed; objects in motion and live objects do not lend themselves well to touch observations, partly because of the dangers involved in any direct contact. Apart from this, objects under certain conditions for instance burning wood or coal, or cooking food, cannot be touched. Liquids do not have shapes of their own and must therefore be kept in containers which often do not permit the observation of the enclosed substances. This is particularly the case with liquids used in gauging instruments.

Further, we have to understand that touch can be of two kinds. One is ***synthetic touch*** that refers to a person's tactual (based on touch) exploration of objects, small enough to be enclosed by one or more hands. However, things that are large require analytic touch. Analytic touch involves touching the various parts of the object one after another, and then mentally putting together these separate parts to form a whole. For example, to form a concept of 'chair', a blind child will touch the seat of the chair, the legs and then the back, one after the other and then integrate these separate parts to form a concept of 'chair' as a whole. On the other hand, the sighted child sees the chair as a whole at once and forms a concept about it immediately. Thus, the child with visual impairment takes a longer time to develop concepts, and sometimes the idea that the child forms about a particular object may not be entirely correct.

So a lot of experiences which are taken for granted by children who can see are either impossible or much more difficult for children with visual impairment. Unlike the sighted children who are privileged to access most of classroom activities, for the learners with visual impairment, tactual perceptions only give partial meaning of objects. **Since the sense of touch and hearing cannot replace sight, people with visual impairment get somewhat reduced experiences.** The lack of vision restricts their range and variety of experiences and there can influence concept development adversely.

b) Limitations in forming concepts due to restricted mobility

Children with visual impairment are also restricted in the ability to move about. This restriction in the ability to move about is regarded by many as the most severe single effect of visual impairment. The total visually impaired person is indeed greatly restricted in her mobility and

experiences lot of restrictions of her movements. Even a small amount of sight, skillfully used, makes a marked difference in the individual's ability to guide herself through familiar and unfamiliar territory.

The implications of the restricted ability to get about by oneself are a twofold, as stated further:

- ✓ Due to lack of mobility the person with visual impairment cannot change her surrounding and so cannot create opportunities for observation and activities as seeing persons can do normally. A child without vision is not likely to feel confident about exploring the surroundings, and may simply refrain from doing so. This will also adversely affect the development of concepts.
- ✓ Lack of mobility also makes the person her dependent upon the assistance of others and thereby affects her the person's social relationship and attitudes.

Thus, individuals with visual impairment, are, from infancy onwards, restricted in their ability to expose themselves to experience. While sighted children have the opportunity to move about and discover their surrounding with ease, children with visual impairment cannot do their with any comparable ease and needs to be provided with experiences and opportunities for activities which most other children find in the ordinary course of their development in their environment. The child with visual impairment has much less chance to explore her her surrounding, and even if she does explore now and then, her experience does not give her any comparable amount of knowledge. Besides the factual experience that she may be able to secure, she perceives many cues as just indicators but not reality because of the limitations of using sense of hearing and touch to form concepts that we have discussed above.

During the early years the restriction in mobility does not make itself fully felt because of the protection provided by the parents at home and the early childhood intervention centre. The child becomes used to these her environments and knows these spaces of the home and the early childhood centre well enough to find her way around these on her own. While the child is very young, she leaves her immediate environment only when accompanied by others, as is also the case with young seeing children. When the child grows up she also grows out of her environment and is confronted with task of adjustment to the world of the seeing. Then her restriction in mobility becomes a factor of major importance and carries new implications. For instance, the youngster who moves from the early childhood intervention centre to the primary school or from residential primary school to a public high school must now pursue her activities in a changed and more complex environment. If she has not been encouraged and taught to develop her ability to move about and has not achieved a reasonable independence in it, her whole success may be jeopardized. In the extreme case, she may not only take for granted that she will be helped to get about, but may gradually tend to expect to be helped for all things at all times. Because of the totally new environment, it is almost like the child with visual impairment has to start learning

everything again, just an infant learn about the world when she is born. It is also possible that the change from the accustomed environment to a strange one, with its challenge in regard to mobility, may make the blind youngster resent and even revolt against being having to be helped in many activities which she finds seeing persons pursuing independently. This may result into dislike or develop into a general hostility toward a seeing society. Either of these attitudes, regression or hostility, if it persists, is a disturbing influence. It indicates a lack of adjustment and there is need for providing careful guidance and counseling aimed at the building of individual's self-confidence.

c) Limitations in forming concepts due to limitations in controlling the environment and themselves in relation to it

Children with visual loss also experience restriction in the control of the environment and themselves in relation to it. The restriction, although least obvious, profoundly affects the development of blind children and makes itself strongly felt in the everyday activities of each blind child. Let us understand how loss of vision makes it challenging to control one's environment and one's own self in relation to the environment.

Among the human senses, sight is the one which overcomes distance and gives at the same time details and relationships of form, size, and position. What this means is that without moving from your place you can see a large part of your environment and form idea about the objects in it. Visual experiences enable actual perception of an object which in turn facilitates a contact with and control of the environment in a far greater way than that achieved by the other senses. Lack of sight, on the other hand, causes a detachment from physical and, to a lesser degree, from the social world. A person with visual impairment, for instance, who finds herself in unaccustomed surrounding, cannot become informed about her surroundings and situation in that environment by any rapid process. On the other hand, the seeing person can immediately understand the environment and make an assessment by just glancing around. The clues which the blind person might get through her hearing and through tactual observation of objects within her reach provide very little information that could assist her in controlling her environment and herself in relation to it.

The detachment from physical environment affects the individual with visual impairment in different ways during her development. The visually impaired infant, for instance, does not reach out for or crawl towards objects, as seeing child does, because nothing entices (attracts) her to do so. Other sensory impressions, mainly audible ones based on the sense of hearing, may make her aware of some objects and she may be induced (attracted) either to reach out for them or move towards them. Such stimulation however occurs comparatively rarely and the blind child is kept from experiencing many situations and from responding to many stimuli which affect seeing children in normal course of their development.

From infancy on, the individual with visual impairment cannot acquire behaviour pattern on the basis of visual imitation. This factor greatly

affects a child's development, particularly in regard to posture, learning to walk, to talk, to play, to learn the expressive movement, and to perform the great variety of other actions which are generally learned by imitations. Many of the daily activities which the child must learn assume greater difficulty when these are not controlled through sight. For example, eating a meal according to accepted standards is not only a greater strain to a person with visual impairment, it also takes much longer. Such actions such as getting properly dressed, using transportation facilities, shopping in a store, are considerably more complicated for them.

The lack of sight is also responsible for some detachment in social sphere of individual's life. The ability to communicate with language is the most important factor in social contact. But besides language there are a great variety of expressive movements which have significance in social situations. These include facial expression and all kinds of gestural behaviour. The blind child's inability to visually observe facial expression of others is not such a disadvantage because to her the voice may be just as expressive as facial expressions or bodily gestures are to the sighted. However, because of visual impairment the child is not able to learn the appropriate facial expression and gestures that should accompany speech. Inadequate facial expressions and gestures by the child with visual impairment are often misinterpreted as unconcern, lack of interest or apathy by seeing companions. In social situations people respond either according to acquired behaviour patterns, or by limiting what others are doing, or by acting according to their own best judgment. The person with visual impairment is at a disadvantage in all three respects. Behaviour patterns are acquired on the basis of visual imitation. Without visual imitation it not only takes longer to learn appropriate behaviour patterns, but the variety of behaviour patterns acquired are also reduced. In a social situation where it is always desirable to follow the behaviour of others, the blind person is unable to do so unless she verbally inquires what needs to be done which at times may be inconvenient or embarrassing. The person with visual impairment can, of course, make her own decision how to act but may feel more insecure about their decisions than seeing persons because visually impaired child lacks self confidence that comes with experience.

Loss of vision places certain limitations on the individual:

- **It restricts the range and variety of experiences.**
- **It restricts the ability to move about.**
- **It limits the person's control over the environment or surroundings.**

Because of these limitations, children with visual impairment experience developmental delays and as a result concepts and other milestones are acquired slowly as compared to the sighted children. Concept development among persons with visual impairment depends on the degree of visual impairment, the age of the person when the impairment occurred, the degree of remaining vision and the extent to which the person uses it effectively. Low vision children also experience difficulties in developing

concepts, but they generally have an advantage over blind children. Children who are blind from birth find it more difficult to acquire concepts as compared to children who become blind after a few years of birth. This is because the children who lost vision after some years, had an opportunity to develop concepts and ideas on the basis of their sight, and they can use that understanding to develop new concepts after the loss of vision. Particularly, if the loss of vision occurred before the age of five years, the visually impaired child may take a longer time to develop various concepts. You should keep in mind that **even a small degree of sight can help the child a lot in acquiring concepts. Thus, you need to encourage the child to use her remaining vision.**

Thus, when fostering development of concept in the individual, you need to organize a wide variety of stimulating activities and experiences. Though factors like degree of impairment, age and motivation of the child influence concept development, the most important factor is the type of experiences and activities that you are able to provide to the child. The wider and richer the range of experiences, the better will be her development of concepts and understanding of the world around. **You will need to organize, explain and interpret the world to the child with visual impairment in a more deliberate and conscious way in comparison to what you would do with the sighted children.**

Begin teaching concepts to the children with visual impairment as early as possible.

Check Your Progress Exercise 1

1) State whether the following statement are correct or incorrect.
   a) Vision is the major mode of acquiring information about people, places, objects and events for the sighted. ( )
   b) A child with visual impairment, due to loss of vision, depends on the other senses for learning and developing concepts. ( )
   c) Loss of vision may adversely affect the development of concepts. ( )
   d) The concept development among persons with visual impairment dependents on the degree of visual impairment. ( )
   e) In the process of learning, all information can be brought within the experience of the child with visual impairment.

2) How does a concept develop?

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3) What are the limitations of the senses of hearing and touch in supporting concept formation for children with visual impairment?

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4) How do restrictions in mobility and control over the environment impact the development of concepts in children with visual impairment?

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12.5 METHODS OF TEACHING CONCEPTS

Just like sighted children, children with visual impairment need to develop numerous concepts. They must be provided with all opportunities and experiences for doing so. **Concept development in sighted children as well as in children with visual impairment proceeds through three stages: Concrete, Tactile-Pictorial and Abstract.** You have read about these stages in Unit 7. Let us recollect what these stages mean with the help of an example.

On a particular day Dolly, a three-year-old girl, with low vision was forced by her mother to eat a banana. She did not like the taste and texture of the banana. A few days later, her teacher in the preschool started an activity on fruits. On seeing the picture of banana, Dolly could relate it with its taste, which she had not liked. She had a disgusted expression. Even a month later, Dolly has that expression on her face whenever anybody utters the word 'banana'.

In the above example, initially Dolly had an actual (real) experience of the taste of a banana. Then concrete experience was related to the picture of a banana the next day. She was now at the pictorial stage of developing the concept of banana — in other words, she could experience the same feelings on seeing a picture of the banana as what she had experienced on seeing the real banana. The expression of distaste at the utterance of word 'banana', even after a month, shows that she has formed a mental picture of its taste and appearance. In other words, she has abstracted the concept of banana. She does not have to see a banana or its picture in order to think about it.

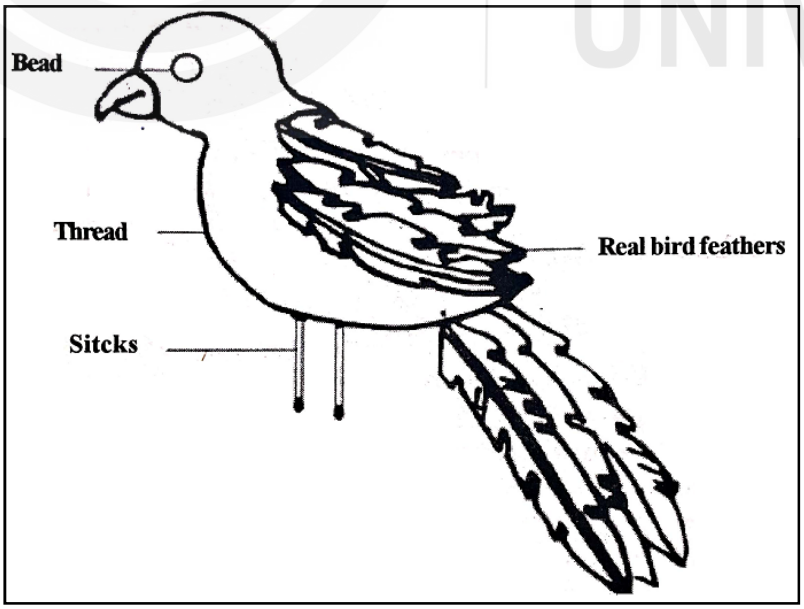
a) Stage 1: Concrete Experience with Objects

As is evident from the above example, the most efficient way of building concepts is to have the child experience the object directly. The same is

true for a child with visual impairment as well. **Adequate experiences with concrete objects is the first step through which all children, including the visually impaired, form concepts.** Therefore, give the child the opportunity to touch various objects around her. This type of concrete experiences is essential, right from the early years of life. In many cases, you will not be able to provide the child with the real object. In such cases, you will need to develop teaching aids. Three-dimensional teaching aids, which depict the object in as real a manner as possible, should be used when the child is being initially taught to develop concepts.

b) Stage 2: Tactile or Pictorial Concrete Experience

Once the child has had lots of experiences of touching and handling a variety of different objects which are real or three-dimensional models, the transition to two-dimensional pictures in tactile form would be possible. **Thus, the second step is using tactile pictures to help the child develop concepts.** You may wonder how pictures can be used with a child who cannot see. Even though printed pictures have no relevance to children with visual impairment unless the child can see partially, **these pictures can be converted into tactile form through the use of materials of different textures such as threads, seeds, buttons, sand and so on, so that the child can feel these by touch**. When you make pictures for tactual exploration, remember that these should not be too small or too large. It should be within the reach of the hands. Use different textures to discriminate different parts of the tactile diagrams. Mathematical concepts such as those related to shape, size, number, operations and measurement; science concepts related to plants, animals and birds can be taught through tactile pictures and concepts of history, like historical places and places of worship, can be taught through tactile models.



These tactile pictures can be easily prepared at home by sticking a thread on the outline of a picture, such as that of a bird. If the picture is too small in the printed format, you can re-draw it in to little bigger size, then you can cut it out and make it tactual in nature by sticking a thread

around its boundary, using a seed/ button/ bead to depict the eye, which can be then felt by touching, using matchsticks to show the legs and real feathers can be stuck to make it more realistic. You will read more about making tactual pictures in Unit 11.

Tactile maps, globes and models made of plaster of Paris are available in the market.

c) Stage 3: Abstract Understanding of Concept

Once sufficient practice is given through pictorial mode for learning and understanding, children with visual impairment can be introduced to abstract mode of learning. This is the third step in the learning process. In the abstract mode of learning, language is used without showing the object or its picture, because it is expected that the child now understands what is meant by the word and can visualize a mental picture of the object in her mind, without having to touch the actual object or its tactual picture.

It is obvious that in the process of learning, all information cannot be brought within the experience of the child with visual impairment. The child cannot be made to experience everything. As the example given, the child cannot the stars, the ocean or the mountains. These concepts can be explained through the use of descriptive language or through models, on the basis of their shape, size and other features. You will need to make sure that the description that you give to the child is suitable for her age and level of understanding. Field trips are very useful in giving concrete experience e.g. visit to mountain or sea side.

Guidelines for Teachers when Teaching any Concept to Children with Visually impaired

1) Teach one concept at a time.
2) The concept should be presented in many ways and in different situations.
3) One should not be rigid. Use any technique/ method which one feel is giving result.
4) The child can initially learn concepts which are concrete in nature and later on one can teach abstract concepts.
5) One should try to teach a variety of concepts.

12.5.1 Teaching of Abstract Concepts

As you read in Unit 7, the word 'abstract' is used in two ways. One is as explained above. The other is that certain concepts are abstract in nature.

First let us understand what are abstract concepts. Abstract concepts are ideas or concepts that do not have a physical or concrete existence. Examples of abstract concepts include love, justice, bravery, freedom, truth, beauty, and happiness. These concepts are not physical objects that can be seen or touched, but nonetheless these concepts hold significant meaning and

importance in human thought and experience. We interpret or understand these concepts through seeing actions or emotions. We cannot touch bravery, but we can understand a brave action when we see one. To help the children with visual impairment to understand abstract concepts we have to bring these into their physical experience. It may not be possible to bring all abstract concepts within physical experience. Nonetheless, the following example shows how this may be done.

In order to help the child understand the concept of beauty of a flower, give the child a real and fresh flower, a rose flower. As the child to explores the flower, simultaneously the description can be given as 'the petals of the flower are well arranged, they are fresh and soft and it gives fragrance'. Also provide a rose flower which is dried and give description as 'the petals of this flower are dried, withered and have no fragrance'. By comparing these two flowers, children with visual impairment *can feel the beauty the flower and the abstract concept of ' beauty' can be understood.*

Check Your Progress Exercise 2

1) How can concrete experiences facilitate concept development in children with visual impairment?

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2) What are the stages of concept development for children with visual impairment, and how can each stage be effectively taught?

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3) How can abstract concepts be taught to children with visual impairment, given that these concepts do not have a physical existence?

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12.6 SUMMING UP

In this Unit, you have learnt that concepts help us in understanding things, people and events around us. Children begin to form concepts from the moment they begin interacting with the environment. The process of development of concepts in the visually impaired takes place in the same manner as that in sighted children. The difference is that the children with

visual impairment form an idea on the basis of their other senses while the sighted primarily rely on the sense of vision. Children with visually impairment tend to lag behind in development of concepts, if they have not been provided with suitable and stimulating experiences.

Concept formation is crucial for understanding the world, and while sighted children use vision to form concepts, children with visual impairment rely on touch, hearing, and other senses. Visual impairment limits the range and variety of experiences, restricts mobility, and affects control over the environment, leading to delays in concept development. These children often form concepts more slowly and may have different, less complete ideas about objects and events. The quality and variety of experiences provided significantly influence concept development. Early and diverse sensory experiences are essential for fostering concept formation in children with visual impairment.

Concept development in children with visual impairment, as in the case of all children, involves three stages: Concrete, Tactile-Pictorial, and Abstract. Initially, children learn through direct, experiences with objects or models of objects which cannot be directly touched. At the next stage, pictures (which may also be tactile pictures) help the child to associate the concrete objects with their two-dimensional pictorial representations. At this stage the child is able to recognize, think of and talk about the object on seeing its picture. The final stage in the development of concepts is the abstract stage where language is used to refer to the object without showing the object or its picture, because it is expected that the child now understands what is meant by the word and can visualize a mental picture of the object in her mind, without having to touch the actual object or its tactual picture. This means that the child's thinking has become abstract — she can think of the object by bringing its idea or image in her mind.

Finally, abstract concepts are introduced through descriptive language and comparison, such as contrasting fresh and dried flowers to understand "beauty." Teachers should present concepts in multiple ways, be flexible in methods, and focus on both concrete and abstract ideas to enhance learning.

12.7 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) State whether the following statement are correct or incorrect.
   a) Correct
   b) Correct
   c) Correct
   d) Correct
   e) Incorrect

2) Forming a concept means to form an idea about objects, things, event and people. A concept is formed by identifying common aspects among things, events people and situations, which we otherwise dissimilar.

3) The senses of hearing and touch have limitations when it comes to supporting concept formation for children with visual impairment:

   i) Limitations of Hearing: Hearing provides some information about the direction and distance of sounds but does not convey specific details about the size, shape, or color of objects. For example, while a child might hear a car approaching, they cannot determine its make, model, or color from the sound alone. Hearing is more useful for understanding spatial orientation and verbal communication rather than for acquiring concrete details about objects.

   ii) Limitations of Touch: Touch can provide information about texture, shape, and temperature, but it has several constraints:

   - Direct Contact Required: Touch requires physical contact with objects, which is not always possible or safe. For instance, a child cannot touch clouds or safely interact with certain hazardous objects like fire.
   - Size and Complexity: Large objects or those in motion are difficult to explore tactually, and small or delicate objects can be hard to perceive accurately through touch.
   - Synthetic vs. Analytic Touch: While synthetic touch involves grasping objects as a whole, analytic touch requires examining different parts separately and integrating them. This process is more time-consuming for children with visual impairment compared to sighted children who perceive objects holistically through vision.

4) Restrictions in mobility and lack of control over the environment significantly affects the development of concepts in children with visual impairment. They get limited exposure to diverse experiences and environments. For example, if a child cannot navigate unfamiliar spaces independently, they may miss opportunities to learn about different objects and settings. This restricted mobility can delay their concept development as they do not encounter a variety of sensory stimuli that are essential for forming concepts.

   The lack of vision affects a child's ability to control and understand their environment. Unlike sighted children, who can quickly assess and interact with their surroundings visually, children with visual impairment have to rely on other senses, which do not provide the same level of detail. This difficulty in controlling and understanding the environment can lead to challenges in learning and integrating new concepts.

   Overall, these restrictions contribute to developmental delays and differences in concept formation compared to sighted peers, highlighting the need for tailored experiences and support to foster concept development in children with visual impairment.

Check Your Progress Exercise 2

1) Concrete experiences play a crucial role in the initial stages of concept development for children with visual impairment. These experiences involve direct interaction with real objects or three-dimensional models.

For instance, a child with visual impairment should be encouraged to touch and manipulate various objects to understand their properties, such as texture, size, and shape. This hands-on exploration helps the child build a foundational understanding of the object. Since sighted children can immediately perceive the entirety of an object visually, visually impaired children need to rely on their sense of touch and other senses to form a complete concept. For example, touching different fruits like apples and oranges helps a child understand the concept of fruit through their textures and shapes. Direct experiences with tangible objects provide essential information that forms the basis for further learning, including the transition to tactile pictures and eventually abstract concepts.

2) Concept development in children with visual impairment generally follows three stages:
   - Concrete, Tactile-Pictorial, and Abstract. Initially, children should engage with real, tangible objects (Concrete Stage) to build a foundational understanding. For example, handling various textured materials helps the child differentiate between them.
   - Once the child is familiar with concrete objects, tactile pictures representing these objects can be introduced (Tactile-Pictorial Stage). These pictures use different textures to provide visual information through touch, helping the child understand concepts like shapes or animals.
   - Finally, the Abstract Stage involves teaching concepts through language alone, without the need for physical objects or tactile images. Here, descriptive language and discussions are used to convey ideas like freedom or justice, which cannot be physically experienced. Effective teaching at each stage involves providing appropriate experiences and adapting materials to the child's sensory needs.
3) Teaching abstract concepts to children with visual impairment requires innovative approaches since these concepts lack a physical form. Abstract ideas such as love, justice, or bravery can be taught through relatable and tangible experiences. For instance, to teach the concept of beauty, a child might explore both a fresh and a dried flower. By comparing the textures and fragrances, the child can grasp the difference between “beautiful” and “withered.” Descriptive language is crucial in this process; the teacher should provide vivid descriptions that connect the abstract concept to the child’s sensory experiences. For example, describing how bravery is demonstrated through actions, such as helping a friend in need, helps the child understand bravery through observable behaviours. This approach bridges the gap between tangible experiences and abstract ideas, making abstract concepts more accessible and comprehensible for children with visual impairment.

UNIT 13 FOSTERING CONCEPT DEVELOPMENT IN YOUNG CHILDREN

Structure

13.1 INTRODUCTION

In this Unit, you will read about how to develop concepts related to the following areas:

- awareness of one's body;
- object/situation characteristics;
- time and distance awareness;
- spatial awareness;
- skill- oriented (action) concepts;

- number and measurement concepts;
- concepts of colour, shape and size; and
- concepts related to the environment.

Activities that you can carry out with children with visual impairment to develop these concepts have been described in the sections that follow. These are some examples. Use your imagination and things around you to devise more activities and give the child more experience.

Objectives

After studying this Unit, you will be able to:

- plan and implement activities to foster development of concepts related to different areas; and
- develop appropriate teaching-learning materials for carrying out these activities.

13.2 CONCEPTS RELATED TO AWARENESS OF ONE'S BODY

'Body awareness' refers to the ability to identify one's body parts in relation, to the self and the environment. You have to help the child to understand her body better. She should

- be able to point the back, front and side of her body.
- be able to identify, name and locate various parts of her body.
- be able to identify left and right.
- know the function of each body part.
- be familiar with the movements of the body — up and down, out and in, away and towards, left and right.
- know about internal organs, bones, joints and their functions.

One can teach the child:

i) The location of each body part

ii) The function of each body part

iii) Relationship between body parts.

Freedom of movement as well as freedom in feeling one's body should be encouraged from the very beginning so as to help the child become aware of her body. Allow the child to feel the bodies of other family members as well. The following are some activities that will help the child to develop concepts related to the body.

Activity 1

You can start this activity when the child is between 1-1.6 years of age, just as you would do with a sighted child.

Help the child to touch and label the following parts of her body so that she knows where they are: front of the body, back of the body, left hand/ right hand, waist, legs, wrist, shoulder, chin, heels, thighs, elbow, palm, throat, stomach, face, eyes, ear, nose, mouth, neck, chin, head and hand.

With a preschooler you can play a game like 'Simon says — touch your head' (name different parts of the body let the child touch each part). Eventually all the body parts should be taught.

Activity 2

Ask the child to perform the following tasks:

— Turn the face in the direction of the sound (make a sound by ringing a bell or clapping)

— Move the chest forward

— Raise the right arm

— Bend the body backwards

— Move the head up

— Stand with feet apart

— Stand erect

— Smile

— Wave hands

— Breathe slowly.

Initially, you have to show the child how to do the task by holding her body and helping her follow the instructions or letting her touch your body as you are doing the task. Detailed description about the tasks being done should be given by you. For example, if you are asking the child to breathe slowly, then let her touch your nostrils and chest. Slow motion of the chest in 'up' and 'down' position helps her to understand what is meant by breathing slowly. You can devise more activities of this kind, which require the child to control her body.

Activity 3

When the child is somewhat older you may explain, and then ask the child to explain/demonstrate, the following activities:

— Where is the heart? How do you know?

— Where is saliva produced?

— Where do tears come from?

— Where are the joints? How do you know?

— When do we sweat?

— What is itching?

— What is pain? Have you felt it?

13.3 CONCEPTS RELATED TO AWARENESS OF OBJECTS

In Unit 10, you have read how a child forms concepts of objects. You know that it includes finding out the common features among a group of objects as well as being able to discriminate them on the basis of their different features. Thus, we see that **for developing object-related concepts, identification of commonalities and differences is very essential**.

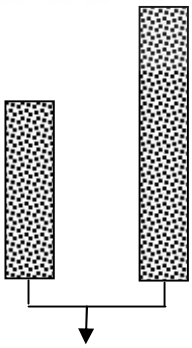
Hence, give the child plenty of experiences to discriminate between long/ short, big/small, tall/short, rough/smooth, hard/soft, sticky/dry and dry/ wet objects. The child should be provided actual materials which she can explore by touching. For example, provide dolls, beads, sticks, plastic materials, ball, blocks, balloons and paper. The following example brings out clearly the need for giving the child opportunities to touch and hold objects.

Radha, child with visualy impairment , came to the special school at the age of six years. Her mother's major anxiety during this time was her daughter's inability to learn to discriminate various objects at home. In the school, she was provided with blocks, beads, leaves, containers, soft toys, plastic materials, sand, clay and many other objects for exploration. Radha felt very happy when she explored the materials on her own and her ability to discriminate among objects improved gradually.

Here are a few activities which you can organize with the child for fostering awareness of objects.

Activity 4

Provide the child with a tactile diagram of two strips — one long and the other short. The tactile diagram may be prepared using glossy paper, velvet or sponge. Similarly, provide the child with tactile diagram of a straight strip and a curved strip or a broad and a narrow strip.



Strips made of glossy paper

Ask the child to feel the diagrams. You may hold the child's hand and help her move her index finger over each strip. It is very important to talk to the child regarding what she is doing. When the child touches the long strip, explain to the child that this is 'long' and the other is 'short'. In this way, she will learn new words and also understand what they mean.

You can devise similar activities for teaching concepts of shape, size, thickness and so on.

Activity 5

Provide the child with plastic cups/bottles/bottle caps/ tins/beads and help her to discriminate between the objects by exploring them with her hands.

Activity 6

Provide the child with two pieces of cloth — one wet and other dry — and ask her to discriminate between the wet and the dry cloth. You can also provide her cloth pieces of different textures.

Activity 7

Provide the child with three pieces of paper — sand paper, smooth paper and sticky paper — and ask her to discriminate between the smooth and sticky papers.

Activity 8

Take three empty vessels/cups. Fill the three containers with moderately hot water, cold water and warm water, respectively. Make the child feel the cups and discriminate between hot and cold water; cold and warm water; hot and warm water.

Activity 9

Provide the child with beads of different sizes and ask the child to put the beads in a wire, beginning from the biggest to the smallest. Initially, give the child three to four beads and then increase the number of beads.

Activity 10

Provide the child with a recorded cassette with a conversation in high pitch and low pitch voice to help her discriminate between variety of sounds. Use the sounds in the environment as well to help the child differentiate between loud and soft sounds.

Activity 11

Help the child collect various materials available at home and put them in a bag (for example a bottle, small cardboard packet, pencil, rubber, scale, books, magazines etc.) Let the child take out one item at a time from the bag, feel it, name it and describe it. This will help her to understand the nature of different objects.

13.4 CONCEPTS RELATED TO AWARENESS OF TIME AND DISTANCE

The concept of time, in all its dimensions, is a difficult thing for the young child to grasp. Time, as we know it in terms of months and years, does not have much meaning for the preschool child — even for the six-year-old. Three and four-year-olds can refer to and talk about the immediate past. They will relate to you what transpired between them and their friends, some time ago. Some four-years-olds can talk about the events of the day before, particularly if they were important to them. They can talk about and refer to

the immediate future; but with less confidence, because they have not experienced it. They can talk about the future in relation to a present or a past event, as when they say, "Next time I will eat the apple" or "When you come to my house next time, I will show you my new toy!" Five and six year olds can comprehend and talk about a longer time period. They can recall vividly events that took place a few months earlier, particularly if they are meaningful for them. Young children (children under five to six years of age) usually do not grasp short periods of time such as minutes. They understand morning, evening and night.

The concept of time also involves understanding how events occur in time and being able to sequence them. For example, given three pictures of a person which show her through different stages of life: child — young person– old person, the child should be able to arrange them in a series. Similarly, when given three pictures of a plant — from the time the seed was sown to when a small stem emerged and later when the leaves grew — the child should be able to arrange them in the correct order. This requires the understanding that people and things change with time, that these changes are orderly and that they occur one after the other. Preschoolers are normally able to grasp these sequences.

Preschoolers also begin to understand changes within a shorter time span, as when you ask them what they do before they go to have their bath, what preparations their mother makes before she cooks the food and so on. When narrating a story to the child when you ask her "What do you think will happen next?", you are asking the child to state the next logical event (i.e., you are asking her to state events as they occur in time). Preschool children are able to do so and this ability improves with age. This shows that they understand that there is an order to things and all things exist in time.

The following are some activities that you can carry out with the child with visual impairment to help her to develop the concept of time:

Activity 12

Teaching of concepts related to time can be started by initially talking about the immediate past — what happened a few hours back. Later on, you can talk about what will happen in the immediate future. Conversations like: "Yesterday we went to the market. Tomorrow, we will go to the park!" help in raising awareness about yesterday, today and tomorrow.

Activity 13

You can start teaching the concept of day and night by relating it with daily routines, such as: "We brush our teeth in the morning." This not only helps the child to understand day/night but also establishes her daily routine.

Activity 16

To help children understand the past, present and future you can set up some imaginary situations, such as the following:

— "Let's pretend it is early morning. What are we going to do now?"

— Talk about what they did yesterday and what they will do tomorrow.

— "It's night time now. What do you do at night? What does the dog do?'. What do the trees do?"

— "What are you going to do on Sunday?"

Activity 15

Slightly older children can be told that 30 days in combination make a month and 12 months make a year. Gradually, help the child to understand and remember the sequence of the days of the week and the months of the year.

Activity 16

In addition to helping the child understand 'young' and 'old' in the context of people, help her to understand these terms as they are used in other contexts also. A few examples are given below:

"This building is old. How old would it be, to be called an old building?"

"This pen is new. What do you mean by 'new'?"

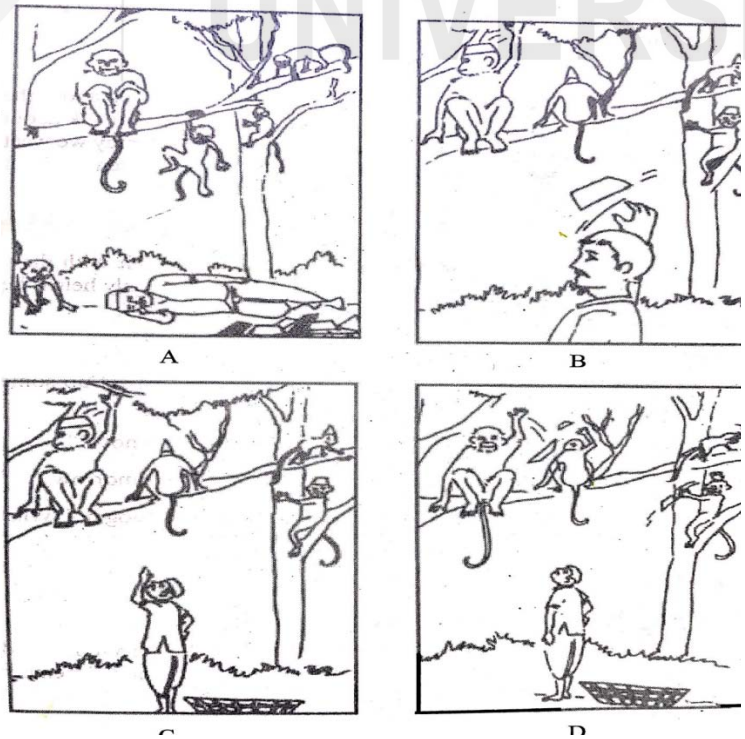
"This is a young elephant. What does the word 'young' mean?"

Activity 17

Concepts of 'never', 'sometimes' and 'always' are also time concepts. Help the child understand these through concrete examples such as: "The bus never comes on time".

Activity 18

As the child grows older, tell her a story which has events occurring in series and then ask the child to recall the events of the story as they occurred (i.e., in the order in which they occurred).



Flash cards showing sequence of events in a story

Help the child experience and understand the concepts of sunny/bright/ dark/ cloudy/rainy/cold and seasons. As we all know, seasons occur in a time sequence and the child with visual impairment must become familiar with the time cycle. Discuss with the child the following:

— How it feels in the sunlight during summer? It feels warm, hot and sweaty.

— What happens during the rainy season? It is _____

— What happens in winter? It is ____

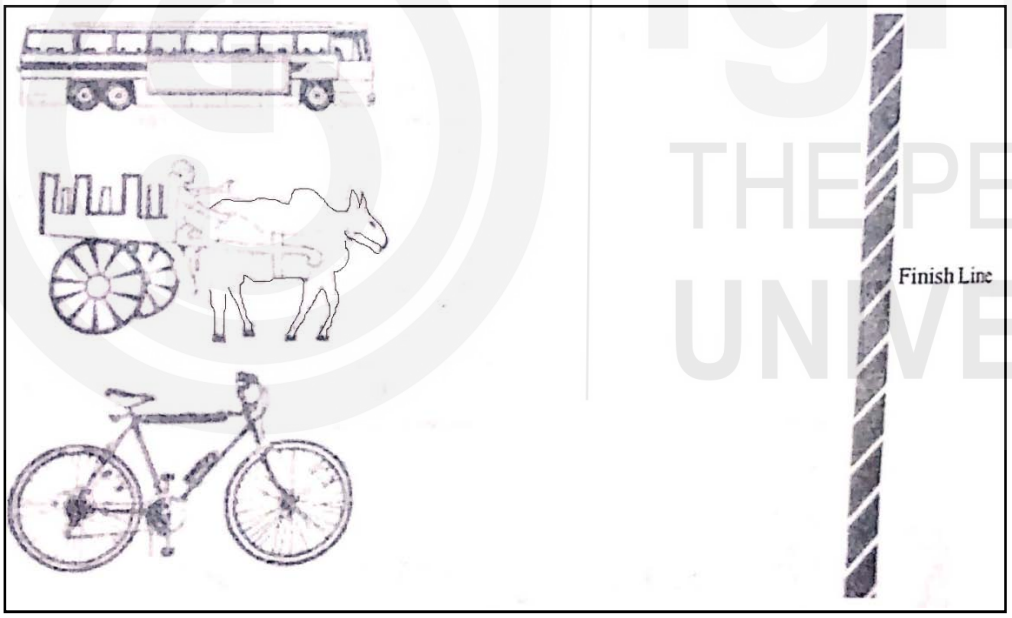
Activity 20

Linked to time is the concept of speed. For the child to understand the concept of speed, you need to help her to know time and distance relations.

In fact, as children begin to understand time, they also talk of things that are 'fast' and 'slow'. Plan your activities around this concept.

— Ask children to go to a certain point — slowly and then fast. Ask them which takes less time.

— Talk of animals/vehicles that move fast and those that move slowly. Draw these on a card depicting that they are in race and ask the child which will reach the finish line first.



Who will win the race?

Activity 21

Children about three to four years of age can make approximate estimates of time, by associating specific activities with different times of the day, with days of the week and with the seasons of the year. Thus, the child can be helped to understand that if she is having lunch it must be afternoon. Help the child understand 'morning', 'evening', 'afternoon' and 'night' by relating it with what the child feels during these times of the day as well as with the weather during different times of the day.

Activity 22

Some situations that deal with a short span of time can help children understand that one can measure time.

Most of us spontaneously carry out such activities with children, such as — "Let us see whether you finish your food first or I finish cleaning the utensils!" or "I will count till ten. Let us see if you can get me the book placed on the shelf." In this way, you can use any activity of the child as a segment for measuring time.

Children can also compare their activities. For example, how many blocks can one child fit into the shelf while another child fills a bucket of water?

As the child grows older, she must understand time in terms of hours and minutes. Ask the child to indicate different times on the Braille watch. Introduce her to 'a.m.', 'p.m.', the number of seconds in a minute, the number of minutes in an hour and so on.

13.5 CONCEPT OF SPACE

Spatial awareness refers to the ability to understand that objects occupy space and that one has to plan one's own actions accordingly.

There are four main areas of spatial concepts, namely,

- **action space** (involves the understanding that when we do any action, it requires space);
- **body space** (involves the understanding that our body occupies space);
- **object space** (involves the understanding that all objects occupy space) and
- **map space** (involves the understanding of maps — the distance and direction) .

It is found that many children with visual impairment encounter difficulty in understanding even the simpler concepts involved in spatial awareness. In order to help the child with visual impairment develop an understanding of these four spatial concepts, **you have to help the child understand concepts related to position, location, direction and distance**.

- Concepts related to 'position' are straight, upright, horizontal, diagonal, curved, perpendicular and parallel.
- Concepts related to 'location' are top, bottom, front, back, to, from, up, down, on, in, under, inside and outside.
- Concepts related to 'direction' are left, right, north, south, east and west. Concept of right and left are also called concept of laterality.
- Concepts related to 'distance' are far, distant, close and very close.

You have to teach the space-related concepts at three levels:

- in relation to the child herself (e.g: Put your hands in front of your face)

- the child in relation to other objects (e.g: Stand in front of the table) and
- other objects in relation to other objects (e.g: Put the book on the top of the desk; Move the table near to the wall) Likewise the concepts of 'next, there, around, towards, between, middle' can be taught.

Developing a correct concept of space is very important for the child with visual impairment because it is necessary for her daily living skills and mobility skills. The ability to move around is closely related to how confident the child feels in moving about and carrying out her daily routine. Later, this skill will help her in school and at the workplace. The teacher will need to provide a variety of situations where the child learns space related concepts through actual experience.

Persons with visual impairment also need to know where their house is in relation to places such as the market, the post office, the school; the street and number of the house, the town and the state where they live and where this in relation to the rest of India. This requires an understanding of map space. This can be explained to the child with the help of tactile maps so that she forms a mental image of the house and its location. **Map space need not be focused upon during preschool years. It is more appropriate to introduce this in later primary years.**

The following activities carried out with the child will help in developing an understanding of action space, body space and object space. They will help her to feel more secure about her environment and confident of moving about. Remember that these are only examples. You can think of other activities as well.

Activity 23

Teach the child the concept of right and left as early as possible. The concept of left and right is also called the concept of laterality.

- You can tie ribbon on the left hand and then give instructions like raise your left hand (the one with ribbon).
- Gradually teach left eye, left leg, left ear, etc.
- Then teach 'right' in the same way.
- Next teach the left and right of the object (left side of the cupboard).
- Lastly teach placement of objects in relation to each other e.g. Keep your books in the left side of the desk.

Activity 24

Help the child to

— Walk parallel to the wall

— Walk perpendicular to the wall

— Walk diagonally from one comer to the other comer of the room, going through the centre.

The child needs considerable help in the beginning with these activities. You will have to explain the terms 'parallel', 'perpendicular' and so on, by asking the child to feel the wall and then explaining to her, her motion in relation to the wall.

Activity 25

Ask the child to

— Put the pencil in the box.

— Put the butter on the table.

— Take the pencil from the box.

— Keep the box inside the bag.

— Pick up the toy from under the table.

Activity 26

For an older child you will have to train the child to know directions namely North, South, East and West. These are called compass directions. Compass directions are very important because they are always constant and these directions help in giving the child a sense of orientation while travelling. While teaching the compass directions, relate these to some known concept. For example, the sun rises in the East; the bus stop is facing the West. This will make it easier to remember other directions in relation to a particular object/place.

Make the child stand facing east and orient her about 'East'. Then make her turn towards West, by doing an about turn. Explain to her that when facing 'East', 'South' is to her right and 'North' is to her left, while it is the other way round when he is facing 'West'. Make her turn in these directions. It will take practice for the child to become familiar with these directions. Once you have given the child some practice, carry out the following activities.

— Let the child face East. Now ask her to turn to the North.

— Let the child face South. Now ask her to turn to the West.

After the four directions are mastered, eight directions can be introduced by orienting the child to North-East, North-West, South-West. Then you may organize activities such as the following:

— Let the child face West. Now ask the child to turn to South-West.

— Ask the child to turn to East. Now ask the child to turn to North-West.

While performing the activities, talk to the child about what she is doing, so that she develops the vocabulary and understands these words.

After much practice, one can ask the child to describe the walking route to school using compass directions. The basic compass directions are North, South, East and West. It is important to memorize how the directions relate. For example 'When I face North, South is behind me, West is to the left and East is to the right.' Compass direction is permanent and it should be learned and practiced by children with visual impairment and low vision for their mobility.

Activity 27

You can teach the concept of map space to the older child using tactile maps. This will help the child to know location of buildings in relation to each other. These **tactile maps** can be easily made by you. For instance, to help the child understand the route to her school from her house, you can make a tactile map by drawing the route with pen/pencil and sticking thread all along the route. Use different textured material to explain the change in the direction of path. The landmarks along the way, such as a well or a park, can be depicted with material of another texture. The following is a simple illustration of a tactile map.

Tactile map depicting the route from the house of the school

Activity 28

Through the following activities, the child will develop a sense of her own body's position in space.

— Make the child bend her body like an arc.

— Let the child stretch her arms up and straight.

— Ask the child to widen the distance between the hands and then bring them back to the original position.

— Ask the child to narrow the distance between the hands and then bring them back to the original position.

— Let the child move in the direction of sound. For example, draw a circle and then whistle and walk on the circle. The child should move in the direction of the sound of the whistle.

— Ask the child to go four steps forward, turn around and come back to the original position.

Check Your Progress Exercise 1

1) What is body awareness?

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2) State two activities that can help in developing body awareness in children with visual impairment?

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3) Fill in the blanks.

a) When you ask the child to 'Put your hands in front of your face', she is developing the concept of space in relation to ……..

b) When you ask the child to 'Stand in front of the table', she is developing the concept of space in relation to ……..

c) When you ask the child to 'Put the book on the top of the desk', she is developing the concept of space in relation to ……..

d) To help understand the concept of time in relation to daily routines, you might say: "We eat breakfast in the ……..."

e) When teaching the concept of distance, you might explain that a car traveling faster will reach a destination …… than a bicycle.

f) If you want to illustrate the concept of "far" versus "close," you might say: "The supermarket is …….. from our house, while the post office is …….. .

g) To help a child understand spatial concepts related to positioning, you can ask: "Put the toy ……. the table and the book ……. the table."

13.6 SKILL-ORIENTED (ACTION) CONCEPTS

Activities of daily living like eating, dressing and age-related play activities involve skills like holding, tearing, stretching of hands, bending, moving the body and so on. Therefore, it is important to develop these gross and fine motor skills in the child as these will help her in learning the activities of daily living.

Some of the activities that can be done with the child to develop these skill-oriented concepts are described below. These activities can be carried out anywhere-in the playground, the house or the classroom.

Activity 29

Make the child (or ask her to):

— stretch her hand

— kneel down

— run to a point

— jump at the spot or from a low chair

— sit on the ground or chair

— crawl

— push chair/table
— kick the auditory ball
— swing her hands
— drag the toy
— kick the ball
— knock on the door

Such actions will help her develop awareness about the body and will also help her to know how to use the various parts of the body.

Some of the activities require materials which can be easily prepared by you. You can prepare an auditory ball. Take a plastic ball and punch a small hole in it. Put some beads/pebbles through the hole. Close the hole. Now the ball will make a sound as it moves and the child with visual impairment can follow it.

Activity 30

To enable the child to carry out activities of daily living independently later on, ask her to do smaller tasks like the following in the beginning. Help the child to

— take off her clothes
— wear the clothes
— comb her hair
— fold her clothes
— squeeze them
— pour water

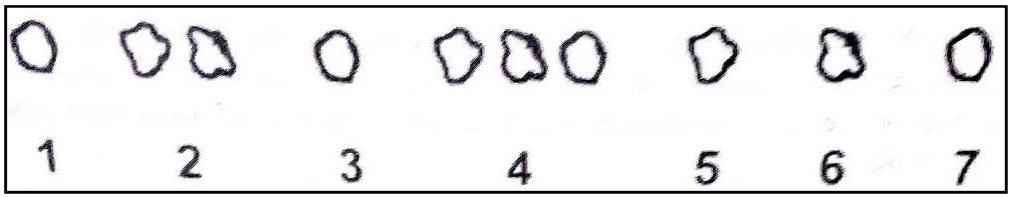
You will have to keep the age of the child in mind when you do these activities. **Initially, you will be doing the activities and the child will be feeling your hand and body movements to understand what you are doing. Gradually, let the child do some actions independently and later the whole activity. Do you remember reading about this three-step process in Unit 7 titled 'The Process of Learning'?**

13.7 CONCEPT OF NUMBER

The number concept is generally taught by teaching the child number names— one, two, three, four and so on. However, it is also true that the ability to recite number names is different from the ability to count. Reciting numbers does not necessarily mean that the child has acquired the concept of numbers or that she knows how to count. Let us understand there with the help of the following situation which typically occurs when one interacts with preschoolers who are learning how to count.

An educator placed 10 pebbles in a row and asked Pankaj to count how many there are by touching them. Pankaj counted the pebbles thrice and came up with a different answer each time. What was happening was that Pankaj either left out a pebble while counting, or counted a pebble twice.

His counting was something like the following:



Sometimes, children continue reciting number names even after each pebble has been touched and counted.

Children who make such errors have not understood one-to-one correspondence. They have not understood that each object has to be touched only once during counting and no object can be left untouched, and only one number has to be called out while touching each pebble. Before children can begin to count, they need to understand one-to-one correspondence, and to do so, they need to understand the meaning of 'many', 'more than', 'less than' and 'as many as'.

The following are some activities which you can organize to strengthen the concept of number; specifically, the concept of more-less and one-to-one correspondence.

Activity 31

Children as young as two-year-old can understand the difference between 'many' and 'few', particularly when the difference between them is large. They can point to many sweets and few sweets, many toys and few toys and so on. However, the child with visual impairment needs deliberate and planned activities to help her understand these concepts, which the sighted pick-up in routine day-to-day life.

Set up two piles of stones, one of which is a much bigger heap than the other. Ask the child to touch the heaps and point to the one which has more stones.

You can use a variety of day-to-day situations to help the child understand 'more' and 'less'; 'many' and 'few' in terms of pencils, water, juice, milk, chappatis, books and so on.

Activity 32

Use everyday activities to help the child develop an idea of one-to-one correspondence. Ask her to check whether there are as many plates as the number of people who are going to eat. As she does so, she is setting-up people and plates in one-to-one correspondence.

Ask her to check if there is one sheet of paper for each child to draw on. As she does so, she is setting up the sheets of paper and the children in one-to-one correspondence.

Activity 33

Another type of activity to foster the understanding of one-to-one correspondence is the following:

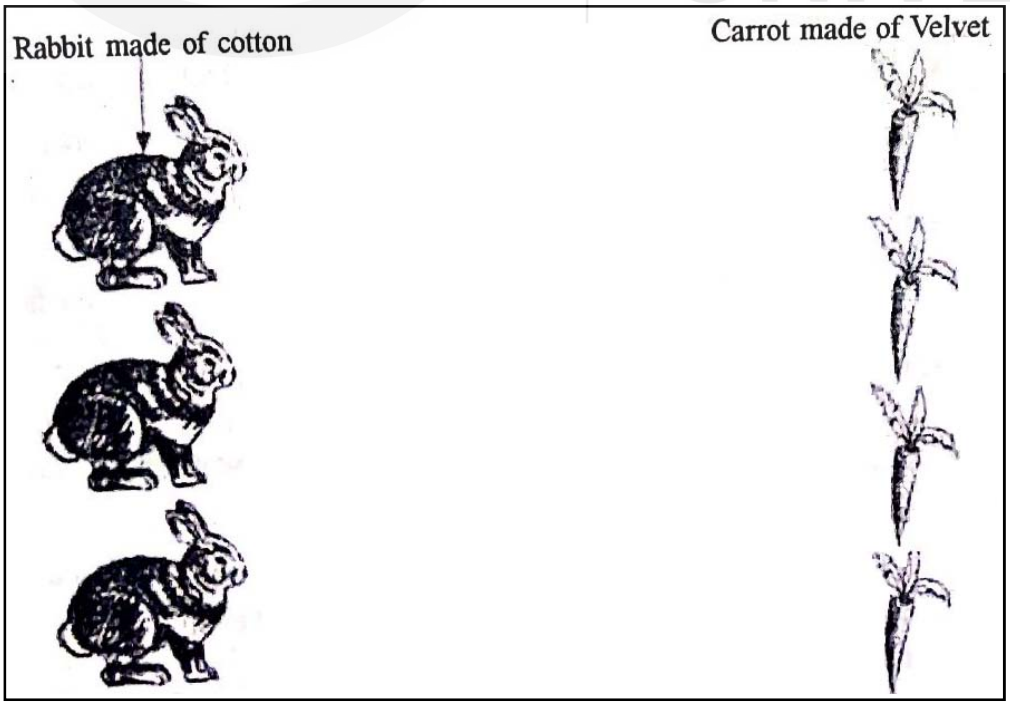
Lay out a row of pebbles and ask the child to make another row with as many pebbles as the first one. Ask her to put out as many beads as the number of leaves; as many paint brushes as the number of children; to put one toy car on each piece of cardboard. Through such activities children develop the idea of' 'as many as', as also one-to-one correspondence.

When the number of items in one group is less or more than those in the other, then arises the concept of 'more than' and 'fewer than'. The situations described above can be easily adapted to lead to an understanding of 'more than' and 'fewer than'.

Practising one-to-one correspondence using actual objects

Activity 34

You can also devise play activities involving one-to-one correspondence through the use of tactual pictures. (You will read about how to make tactual pictures in the later part of the Unit). Through an activity like the following using tactual pictures, ask the child to find out if each rabbit has a carrot to eat or are there more carrots than the rabbits.



Using tactual pictures for one-to-one correspondence

During the activities ask children questions like: “Are there as many plates as the number of children?”, “Are there more leaves or more beads?’ and “Are there more carrots or more rabbits?”.

When doing any activity with the child talk to her about what she is doing. Only then will she begin to understand words associated with that activity and use them correctly.

Introducing Counting:

Most of us while introducing number names and teaching how to count, do so in the absence of real objects. We present number names to the children in a sequence, expecting that children will learn them in the order and understand what they mean. But this does not make sense to many children. **It would be helpful to introduce counting using objects.**

When learning how to count, **the child needs to understand that each successive number is one more in quantity than the previous one.** To facilitate this understanding, as you introduce counting, touch the first object and say: “This is one leaf” and put it on one side. Then take the second one, move it towards the first one and say — “This is one more. So now there are two. One and one make two.” Continue in this way. This helps in making it clear to the child that the number name refers not to a particular object, but to the size of the group of objects that we have kept to one side. Such a method helps the child to know that there is a sequencing of number names and that the subsequent number is one more than the previous one.

When you have introduced some numbers in this way, let the child have repeated experiences with these numbers. Give her opportunities to encounter ‘two’ in different situations — two people, two sticks, two pencils, and two balls.

Introduce a few numbers at a time. This gives the child enough time to understand what they mean and will lead to more permanent learning and avoid confusion later on.

The script (in braille) for numbers should be introduced after the children have had considerable exposure in counting using concrete objects.

13.8 CONCEPT OF MEASUREMENT

Once the child begins to develop a concept of number, the concept of measurement can be introduced. Measurement is an integral part of developing mathematical concepts. An understanding of measurement involves three aspects:

— An understanding of the need for a unit of measurement against which things are to be measured.

— An understanding that measurement can be expressed as a multiple of any number of units. (e.g. metres or yards for measuring length).

— An understanding that while creating an arbitrary unit of measurement may be appropriate in a specific instance, it is not possible to compare measurements taken by various arbitrary units. For example, the instruction, "Go sixteen steps" would yield a different distance for different people, depending on the length of each person's step. Thus for different measurements to be comparable, there must be a standardized unit.

However, for children to understand these aspects, they need many informal and spontaneous experiences of measuring. They must get opportunities to discover these principles for themselves. In their day-today activities, children are required to know 'size' as when the teacher says: "Give me the smallest pencil" or when the child remarks: "I am taller." When children compare and order objects (i.e., arranging them in decreasing or increasing order of size) they are measuring — though this measurement is not with respect to some standard unit, they are nevertheless establishing the relationship of objects with each other.

While the sighted children come across many such situations in day-today life, for children with visual impairment such situations and experiences would need to be deliberately created. For instance, to help children understand that there is a need for a unit of measurement, you can carry out the following activities:

Activity 35

Ask the children 'to measure how long the rooms are by counting the number of steps it takes to cover the room'. Similarly, they can measure the playground, the kitchen and other places. Expressing the measurement in terms of number of steps, they can compare the lengths of different rooms.

Similarly, they can count the number of cups of water it takes to fill containers of different sizes.

Activity 36

Help the child pour a certain amount of liquid into a container by making her touch the container's surface from outside and letting her notice that as the level of hot/cold liquid inside the container rises, there is a difference in the temperature of the container's surface. Thus, by noting the difference in temperature on the surface of the container, she can have an idea about the level of liquid in the container.

Activity 37

Ask children to find out how tall each child is by marking the height against the wall tactually, and measuring it with a rope or a ribbon.

Activity 38

Ask the child to determine how many blocks/pieces of paper it takes to cover the table or a particular section of the garden or floor. You can make tactual boundaries of a certain area in the garden or the floor so that the child knows how much area has to be covered.

Through these play activities will also arise some contradictions which will spur children's thinking towards a need for standardized unit of measurement. For example, as each child measures the room and expresses it in terms of number of steps, point out that the length of the room becomes different with each child. Ask the children to find out the reason for this. You can discuss that the length of each child's steps varies. Similarly, as children measure the number of cups it takes to fill a container, give them cups of different sizes. This will again lead to a discussion that the number of cups it takes to fill the container depends on the size of the cup. Such activities will help them to develop the concept of size. This awareness can then lead on to a discussion that you need a standard unit of measurement, if measurement made by different people is to be comparable. To reinforce this aspect, you can devise activities like the following:

Activity 39

Ask each child to give you a handful of sand. Then ask them to compare the heaps by touching and feeling them with the palm. The heaps will be different from each other. Point this out to the children. As a variation, ask them to cut a piece of paper of the size of their hand. Help them realize that the size of each paper is different.

From experiences such as above, you can evolve the need for a standard unit of measurement. However, you will have to judge by children's reactions how far they are ready to extend these experiences. Basically, the discussion on the need for a standard unit of measurement must evolve from children's own perceptions. When the children find out that the result is different each time, it indicates that they are ready to extend their thinking a little further.

13.9 CONCEPTS RELATED TO THE ENVIRONMENT

It is necessary to introduce children with visual impairment to concepts related to the environment and things around them. This will enhance their information about their surroundings and will also enable them to have more control over what goes on around them. You can introduce them to many aspects of their environment through play activities. Some of the concepts around which you can plan activities are:

- Concepts of water, air, floating, sinking, shadows, weather, seasons, day, night, rain, clouds (i.e**., concepts about the physical environment**)
- Concepts related to plants, fruits, vegetables, birds, animals, people and oneself (i.e., **concepts related to living things/ biological environment**)
- Concepts related to festivals and fairs; people in different occupations — the doctor, the farmer, the vegetable seller and so forth; services for people like the hospital, the post office, the market; people in different climates and cultures — their habits, dress, festivals (i.e., **concepts related to culture and society**).

Here is an example to show how the concept of 'floating' can be explained.

Rajni was teaching her seven-year-old son with visual impairment the concept of floating and sinking. She explained to her that light objects float and heavy objects sink. Her son asked: "Mummy, will a leaf float or sink?" She immediately replied: "Let's put it in the water and see!" She brought a tub of water and assisted her son in putting the leaf on the water's surface. She then asked her to find out whether it was floating or not, by touching the surface of water gently with his hands. Then they tried out this experiment with a variety of other objects.

Activity 40

Awareness about the environment can be enhanced by taking the child to visit places such as the post office, bank, park, shops, neighbour's house, railway station, hospital, temple, mosque, church and so on.

Before taking the child on any excursion, describe to her about what she is going to experience. When you are at these places, help her to understand what is happening there. Help her to identify and recognize these places through the sounds, smells and voices of people typical of these places. During the visits, encourage the child to question and help her to learn through, these questions.

After the excursion, discuss with her what she experienced and how she felt. You can make tactile pictures and models to help the child develop concepts. Sub-section 13.16.1 describes how to make tactile pictures.

Fostering concept development through a rhyme about animals in the jungle

Check Your Progress Exercise 2

1) Why it is important to develop concepts related to the physical, biological and social environment?

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2) How can activities involving physical movements, such as stretching and crawling, benefit the child in developing motor skills and awareness about their body?

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3) What is one-to-one correspondence, and how can it be taught to a child with visual impairment through daily activities?

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4) Describe an activity that helps children with visual impairment understand the concept of measurement using temperature differences.

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13.10 CONCEPT OF SIMILARITIES AND DIFFERENCES

Help the child to know the similarities and differences between objects through her sense of touch, taste and smell. For this, provide the child with items like the following:

— Nylon ribbon and satin ribbon

— A mixture of fruits and vegetables

— Chocolates, biscuits of different types, juices of different fruits.

— Wheat flour, sugar, salt

— Soft thread, thick thread, rough thread

— Small bricks and stones

— Cloth of different textures

— Dolls or puppets wearing male or female clothes.

13.11 CONCEPT OF MATCHING

Matching involves identifying and putting together those objects, which are identical. For example, identifying red circles of the same size from a collection of circles of different colours and sizes.

While introducing activities to promote the concept of matching, it is important that the different objects from which some have to be matched, vary in one respect only. For example, when asking children to match blocks of a certain size from a collection of blocks of different sizes, their shape and colour must be the same and only the size should vary. This is because initially children find it difficult to consider more than one attribute at a time. If the blocks varied in terms of both their size and shape, then children may get confused.

When children have had several experiences of matching, explain and talk about the attribute on the basis of which they are matching. For example, when they have matched different shapes in different situations (for example, using cards, blocks, beads, pieces of cloth etc.), you can say: "These are round and these are square." **Thus, through the activities of matching, children will also develop concepts of shape, size, colour (in the case of children with low vision), texture and so on.** For instance, when you ask children to put all the toys in one basket and all the books in another, children are matching objects, according to the criteria 'toys,' and 'books'. They have thus developed a concept of 'toys' and 'non-toys', 'books' and 'non-books'.

Gradually, as children are able to match on the basis of one attribute, you can increase the complexity of the task by asking children to match objects that vary on two attributes such as shape and size, texture and shape and so on, as given in the following activities:

Activity 41

From a collection of round and square beads of blue and red colour, put aside a square red bead and ask the child to pick out others like that. There is no need to use the words 'square' or 'round' initially. Showing or letting the child feel the object with which others have to be matched is enough.

Activity 42

Make some cards from covers of old notebooks, calendars or greeting cards. Draw or paste tactual pictures of different objects on these cards. Each object must be drawn on two cards. Ask the child to match similar cards.

Activity 43

Ask the child to match flowers and leaves she may have collected, according to their texture, colour, shape or size.

Activity 44

Cut out many cloth pieces of the same shape and size but of different textures — e.g. velvet, cotton, wool, and silk. Put these in a container and ask the child to pick out all the pieces of a particular texture - say- velvet.

As a variation, distribute the cloth pieces among other children and ask each child to find a partner who has a similar piece as her.

To increase the complexity of the task for older preschoolers, cut these cloth pieces of different textures into different shapes. Now the child will have to consider two-dimensions — shape as well as texture, to match the cloth pieces.

Activity 45

Make a tactual picture and ask the child to colour all the circles with one colour and leaf shapes with another colour.

13.12 CONCEPT OF CLASSIFICATION

Classification (or grouping or sorting as it is also called) **involves putting together things that have some characteristics in common.** As children get experiences in grouping objects, they develop the concepts of 'alike', 'different' and 'belongingness'.

The ability to classify develops from the ability to match and most of the play activities designed to foster the ability to match can be developed into classification activities. While in matching activities the objects to be matched must be alike in all respects, in classification activities the objects placed in a group may be different from each other, but would have some property/properties in common.

Once children are able to match, they are ready for sorting or classification activities. Sorting tasks arise in play and every day activities as children are asked to put the blocks in one bag and the beads in another; as they put the unclean plates at one place and the clean ones at another; as they separate squares and triangles from paper cut-outs.

Begin the classification activities with objects that differ on one criterion only. Introduce these activities in situations and ways that are meaningful for the child. **Gradually, the classification tasks can be made more complex — involving sorting on the basis of two criteria.**

Let us now take a look at some broad guidelines for carrying out classification activities. Basically we need to remember that we must begin with simple activities and go on to the more difficult ones.

- Initially, give children material to classify in any way they like. Talk to them about what they have done. To begin with, you may have to show the children how to do the activities.
- Follow this up by asking them to classify on the basis of some physical characteristic like size or shape or texture. Explain what has to be done, for example, "Put together all the objects that are round"; "Put together all the things that we eat"; "Find from this pile all the things a carpenter would use". **Asking child to make categories on the basis of a class or function** like vegetables or fruits or things used for cooking or things used by a carpenter, as in the above example, **is more complex than classifying on the basis of a physical characteristic, such as shape**.
- At the next level of difficulty, the instruction is more general — "Put together all the objects that go together" or "Sort all of these into two groups so that each group has objects that go together".

- Classification activities taking two dimensions into account are difficult for preschoolers. In such activities, there is more than one way of classification. For example, cardboard pieces cut into two different shapes (such as triangle and square) having cloth of two different textures pasted on these shapes, would give you four groups — smooth triangles and rough triangles, smooth squares and rough squares. The classification which includes the dimension of shape as well as texture is more sophisticated. However, classification on the basis of one criterion is also correct — thus a child may make two piles: one containing smooth and rough circles and one containing smooth and rough squares. In such a case, when children have made groups on the basis of one attribute, either shape or texture, draw their attention to the fact that each group can be further sub-divided. The important point in classification activities is that the child should be able to maintain the criterion for classification throughout the activity.
- Asking the child to state what is common to a group of objects you have put together is more complex than all the former activities.

Based on the above principles, the following are examples of some play activities that you can carry out with the child to foster her ability to classify. We begin with the simpler ones leading on to more difficult ones.

Activity 46

Make available a variety of vegetables and ask the child to sort them into groups. Let the child evolve her own criteria for classification and group them in any way she likes. Once she completes the activity, talk to her about the criteria she has evolved by asking her questions like: "Why are these together?" and "Why not put this here?"

Activity 47

When the child has finished playing with blocks and is putting them away, ask her to put blocks of a particular shape together.

Activity 48

While she is enjoying a meal, discuss the foods that taste sweet, sour or salty.

Activity 49

Collect leaves of three different shapes and ask the child to "put together the leaves that are alike". Initially you may need to help her. Help her feel the three different leaf shapes and indicate that they form three groups. Gradually such help must be lessened. Then you may word your instruction as: "Put the things that belong together in one group".

Activity 50

Give the child buttons, which vary only in terms of shape or size. Ask her to put the similar buttons together. If she finds it difficult to carry out the activity based on this general instruction, be more specific and ask her to "put all the round ones together" and so on.

Activity 51

Make available items of clothing to be sorted on the basis of colour or function.

Activity 52

When the child has had many experiences with concrete objects, you can organize classification activities that involve pictorial representation. For example, make tactile diagrams of an apple, a banana, an orange, an onion, a brinjal and a radish on separate cards and ask the child to sort them.

Activity 53

Put together some objects in a group on the basis of some common property. Ask the child to examine this group and ask her what, in her opinion, is common to these objects grouped together. You may ask the child questions like: "Why have you made the groups like this?" and "What is common between these objects that you have placed together?" **This is necessary for two reasons — talking about what she has done helps the child to clarify her thoughts and develop vocabulary and you come to know how far she has grasped the idea.**

Classification activities build the concept of some, none, one and all as the child realizes that "some are in this group" and "none is left". The child also develops concepts of colour, texture (rough, soft, hard), size (longer, short) thickness and shape.

Let us now look at activities that specifically foster development of concepts of colour, shape and size.

13.13 CONCEPT OF COLOUR

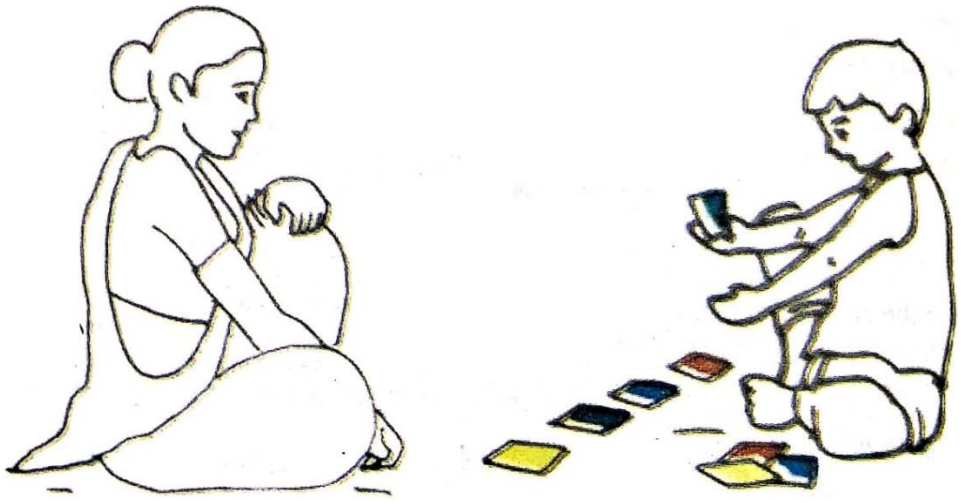
The following are some examples of activities for children with low vision to foster concept of colour. Begin with activities that require the child to match and then move on to activities based on the skill of classification (also called grouping or sorting).

Activity 54

Collect papers of different colours such as blue, red, green and yellow. Prepare two cards of each colour. Thus, you will have two sets of cards. Spread out one set of cards in front of the child. Give the other set to the child and ask her to match the cards in her set with the cards laid out in front of her.

Activity 55

Collect five blue and five red pens. Give these to the child. Ask the child to sort blue and red pens, i.e., ask her to put blue pens in one group and red pens in another.



Matching colour cards

Activity 56

Collect a few lemons and brinjals. Give these to the child and ask her to sort them. Orient the child that lemons are yellow in colour and brinjals are purple in colour. This sorting can also be done on the basis of smell, size and shape, in case of children who are blind.

Activity 57

Collect a few pieces of cloth of different colours. Paste them on cards and give these to the child. Let the child explore these cards and sort them out on the basis of colour, i.e., she should put cloth pieces of similar colour together.

Activity 58

Give the child sheets of waste paper. Ask the child to paint different colours on each piece of paper. You will have to train the child to use the paint and paint brush.

Activity 59

Help the child to do vegetable printing. Take a piece of onion. Cut it into two pieces. Dip one piece in the water colour and then print on plain paper. The child can experiment with other vegetables like potato, lady's finger etc. to get various shapes.

Can we teach concept of colour to a child who is blind and cannot see at all? Of course a child with total vision loss cannot perceive colour. Still we can teach the concept of colour by **'Association method'**. Associative learning is the process of connecting or associating two or more things together to understand them better. For example, to teach the concept of 'black colour' to a child with blindness, we list the real things which are black in colour such as crow, hair etc. and make the child connect the crow with the colour 'black'. In a similar way, you can teach the concept of 'white colour' by associating the word white with milk, curd or teeth. Colour like 'green' can be associated with leaves and brown with bark of the tree. By using association method, you teach the concept of tiger by associating it with cat. By showing the real cat and describing the shapes, fur and nails, you

can explain the tiger is bigger than cat, ferocious but cat is docile and small. Help the child to make a connection between these two animals. The life and motion of the animal can be better understood by the child when you give the real domestic animal than giving a stuffed model of animal all the time. With associative learning, the brain learns to associate or connect things together. **Of course the child will never actually know what different colours look like but the child will be able to follow the conversation of the sighted when she knows colour names and can associate these with objects.**

13.14 CONCEPT OF SHAPE

The following are examples of some activities to strengthen the concept of shape. **Begin with activities that require the child to match similar shapes and then move on to grouping activities** (where the child has to put objects of similar shape together in one group).

Activity 60

Ask the child to collect leaves. Help her to feel and discriminate the different shapes of the leaves and to put leaves of similar shapes together using her sense of touch.

Activity 61

Give the child wooden pieces in the shape of triangle, square or circle and ask her to sort them out on the basis of shape (i.e., put all the triangles in one group, all the circles in another and so on).

Activity 62

Collect containers of different shapes like ice cream cups, powder tins, sweet boxes, coconut shells etc. Give wet sand to the child and show her how to fill the wet sand into these containers and make moulds. Ask the child to feel the shape of different moulds lightly with her hands.

Activity 63

Give clay to the child and ask her to create different shapes. Later she can try to make objects.

13.15 CONCEPT OF SIZE

The following are examples of some activities to strengthen the concept of size. **Begin with activities that require the child to match similar size and then move on to grouping activities. You can also plan seriation activities**, i.e., activities where the child has to arrange objects in the order of increasing or decreasing size.

Activity 64

Provide the child with sticks of different lengths. Ask the child to arrange these sticks from smallest to biggest (i.e., seriate them.). Initially begin with 3-6 sticks and gradually increase the number of sticks. Also, when you begin the activity, use sticks which are significantly different in size. You can even use beads and buttons.

Activity 65

Provide the child with containers of different sizes and help her to place them one inside the other.

Activity 66

Provide the child with vegetables/fruits of different sizes, for example, potato, brinjal, drumsticks, bitter gourd, beetroot and tomato. Help her to learn to identify them using her sense of touch.

Activity 67

Provide the child with plastic bangles of different sizes. Ask the child to arrange them by size.

Activity 68

Provide the child wooden blocks of different sizes and ask her to insert them in the appropriate places on a board.

13.16 DEVELOPING APPROPRIATE MATERIALS FOR ACTIVITIES

The material required for various activities described above has to be developed by you. This material can be prepared at home or the existing material can be converted into tactual material. You will understand this better once you read some of the examples given below.

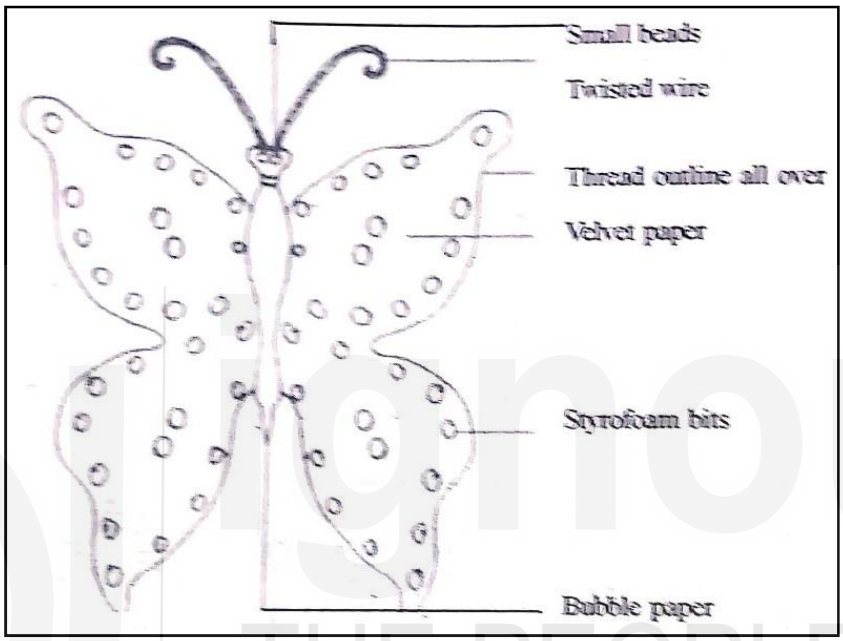
13.16.1 Hanging TactualP ictures

Materials required: Sketch pen/pencil, notebook covers/cardboard pieces, gum, scissors, thread, clothes hangers, satin thread.

Procedure: Take a piece of cardboard. Draw an outline of a fish and cut it. Paste the satin thread on the outline of the fish. Punch a hole on the top part of the fish. Insert the thread through the hole and hang the fish in the room.

Similarly, cut pictures of butterfly, duck, parrot, elephant etc.

Hang them at the child's eye level in the room so that the child with low vision can see them and the blind child can touch them. It is important to give the child with visual impairment these objects to touch because she may not get a chance to touch actual animals and birds. In any case, all of them cannot be touched. Similarly, tactual cards can be prepared with respect to a variety of objects using materials such as flat buttons, satin thread, ribbon, beads, wire, styrofoam bits and shells — these can be pasted all along the picture to make it tactual in nature.



A tactual card

13.16.2 Stuffed Toys

Materials required: Sketch pen/pencil, pieces of cloth, cotton/ small waste pieces of cloth, scissors, thread, button/ bindi.

Procedure: Take two pieces of cloth. Draw an outline of a rabbit and cut along the shape of the rabbit on the two pieces. Stitch the two pieces along the outline, leaving a small gap. Turn the stitched cloth inside out. Stuff cotton through the hole and then stitch up the hole. You may stitch buttons to indicate eyes. A stuffed rabbit is ready. Similarly, other stuffed insects, animals and birds can be made and given to the child to play with.

If you insert a wooden stick into the body before stitching up the hole, you can make a stick puppet.

13.16.3 Moulds

Materials required: Wax containers in the shape of triangle, circle and square, small stove/lamp (to melt the wax).

Procedure: Heat the wax and liquefy it. Pour the wax into containers of different shapes. The inner surface of containers is given a thin coating of oil beforehand. The wax would take the form of the containers on solidifying. As soon as the wax solidifies and cools down, take out the 'shapes' from the containers.

13.16.4 Cards for Matching Activities

Materials required: Cardboard, pieces of cloth of different textures (silk, cotton, felt, polyester etc.) gum, scissors.

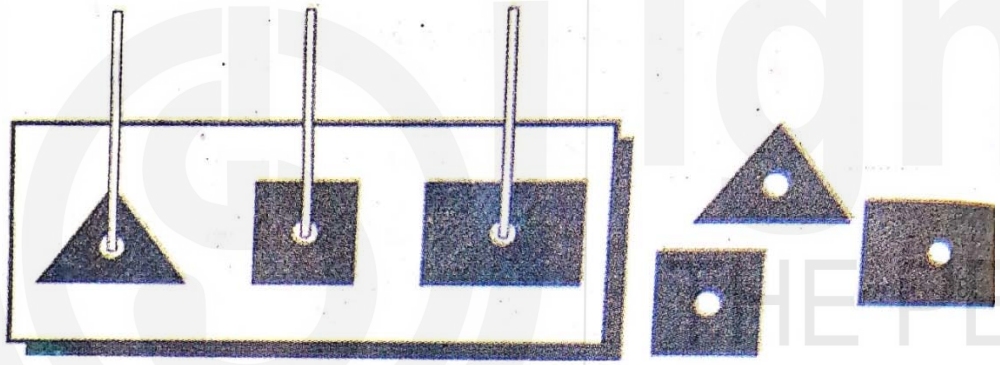
Procedure: Make a few cards, using cardboard. Cut pieces of cloth of different textures and paste them on the cards. At the end of each card, paste a strip of paper in the form of a pocket. Insert a similar piece of cloth as pasted on the card in the pocket. Separate the card and the smaller pieces of the cloth. Ask the child to match the piece with the card appropriately.

13.16.5 Models

Method I

Material required: Wooden stand with three rods, cardboard, sharp knife.

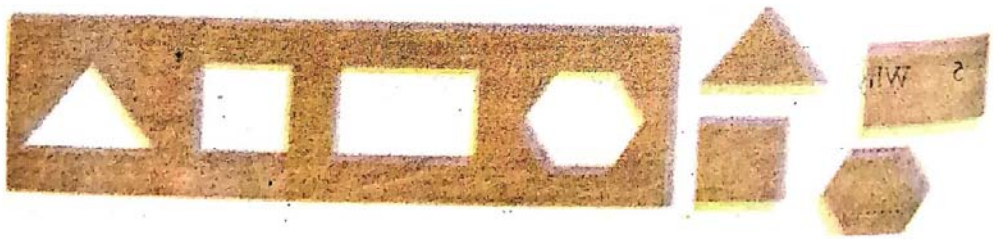
Procedure: Take a wooden stand with three rods. Cut out shapes of triangles, squares and rectangles from cardboard. Make holes in them to fit the rod. If needed, you can also paint them. The children with visual impairment would be able to use them appropriately to learn concepts of size, shape and colours.



Method II

Material required: Cardboard, sharp knife

Procedure: Take a flat sheet of cardboard. Carve different shapes such as triangle, star, pentagon, circle and hexagon on the cardboard. Cut out the carved pieces from the cardboard. Now you have the pieces of circle, triangle etc. and you also have these shapes cut on the cardboard (refer to illustration on the next page). Ask the child to fit each shape in the appropriate place in the cardboard. Similarly, you cart carve different animals/birds etc.



Fitting-in the right shapes

13.16.6 Wooden Blocks

Materials required: Wooden pieces, empty containers and paints.

Procedure: Make wooden pieces of different shapes and paint them with different colours. Place them in an empty container. Ask the child to sort out the pieces as per the instruction given. For example, you can ask the child to pick out the red pieces or all the circles.

You can also bring about variations by having wooden pieces of different sizes/ lengths, or by pasting different textured material (e.g. cotton and rexine) onto them.

As mentioned earlier, the activities suggested in this Unit, to foster the development of various concepts in the child with visual impairment are only examples of what you could do. You must go ahead and devise many other such activities that would enable the potential of the child to blossom.

Check Your Progress Exercise 3

1) Describe how you might use different textures to help a child with visual impairment understand the concept of texture. What materials would you use, and how would you organize the activity?

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2) How can the concept of colour be taught to a child with visual impairment using associative learning? Provide an example of an activity that utilizes this method.

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3) Explain the concept of classification for children and how it progresses from simple to complex activities. Illustrate with an example activity involving objects of different types.

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13.17 SUMMING UP

In this Unit, you have read about how to develop and conduct activities related to several areas of development, such as — body awareness,

awareness of objects, time and distance awareness, concept of space, skill-oriented (action) concepts, number concept, concept of environment, concepts of colour, shape, size, matching and classification.

- **Body Awareness**

  Significance: Understanding one's own body parts, their functions, and spatial orientation helps in personal safety and coordination.

  Example Activities:

  — Body Part Identification: Use a simple song or game where the child touches different body parts as they are named (e.g., "Head, shoulders, knees, and toes").

  — Body Mapping: Trace the child's body outline on a large sheet of paper and label different body parts. Have the child touch or point to the labeled parts.

- **Awareness of Objects**

  Significance: Recognizing and understanding the properties and uses of objects aids in cognitive development and daily functioning.

  Example Activities:

  — Object Exploration: Provide a variety of objects (e.g., a spoon, a ball, a book) and let the child explore their textures, shapes, and uses through touch and manipulation.

  — Object Function Matching: Pair objects with their functions (e.g., match a cup with drinking, a fork with eating).

- **Time and Distance Awareness**

  Significance: Understanding time and distance helps in planning, organization, and spatial orientation.

  Example Activities:

  — Time Concept Games: Use a visual or tactile timer and practice activities with specific durations (e.g., "We will play for 5 minutes").

  — Distance Estimation: Use simple activities to estimate distance, such as jumping from one mark to another or comparing distances between objects using a tape measure.

- **Concept of Space**

  Significance: Recognizing spatial relationships helps in navigation and understanding the arrangement of objects.

  Example Activities:

  — Spatial Relationships: Use blocks or other manipulative to create patterns and ask the child to replicate them. Discuss concepts like "next to," "behind," "in front of," and "between."

  — Spatial Navigation: Set up a simple obstacle course and guide the child through it, discussing directions and spatial terms.

- **Skill-Oriented (Action) Concepts**

  Significance: Understanding actions and movements enhances physical coordination and cognitive development.

  Example Activities:

  — Action Matching: Use cards or picture books showing different actions (e.g., running, jumping) and ask the child to perform or identify them.

  — Movement Games: Play games that involve following instructions (e.g., "Hop on one foot," "Twirl around") to reinforce action concepts.

- **Number Concept**

  Significance: Grasping numerical values and quantities is foundational for math skills and everyday problem-solving.

  Example Activities:

  — Counting Objects: Use objects like blocks or beads and count them together, reinforcing number recognition and quantity.

  — Number Matching: Create number cards and matching sets of objects. Ask the child to match the number with the corresponding quantity of objects.

- **Concept of Environment**

  Significance: Understanding the environment helps in adapting to surroundings and recognizing different settings and their features.

  Example Activities:

  — Environment Exploration: Go on a nature walk or visit different rooms in the house and discuss the features and functions of each environment.

  — Sensory Mapping: Use sensory experiences (e.g., feeling the texture of tree bark, listening to the sounds of a park) to help the child understand different environments.

- **Concept of Colour**

  Significance: Recognizing and differentiating colours supports visual learning and categorization.

  Example Activities:

  — Colour Matching: Provide coloured cards and objects and ask the child to match the colours.

  — Colour Association: Use everyday objects and associate them with their colours (e.g., "The apple is red").

- **Concept of Shape**

  Significance: Understanding shapes helps in spatial reasoning and object recognition.

Example Activities:

— Shape Sorting: Use blocks or cards of various shapes and ask the child to sort them by shape (e.g., circles, squares).

— Shape Creation: Use play dough or drawing to create different shapes and discuss their attributes.

- **Concepts of Size**

  Significance: Recognizing size differences is important for understanding measurements and comparisons.

  Example Activities:

  — Size Sorting: Provide objects of different sizes and ask the child to arrange them from smallest to largest.

  — Comparative Activities: Use terms like "big" and "small" to describe objects and their relative sizes (e.g., "The elephant is big; the mouse is small").

- **Concept of Matching**

  Significance: Matching involves identifying and grouping identical or similar items, reinforcing visual and tactile discrimination.

  Example Activities:

  — Picture Matching: Use picture cards of similar items (e.g., pairs of animals) and ask the child to match the pairs.

  — Object Matching: Use real objects and ask the child to find and match identical items (e.g., matching pairs of socks).

- **Concept of Classification**

  Significance: Classification involves grouping items based on shared characteristics, aiding cognitive organization and categorization.

  Example Activities:

  — Object Sorting: Provide a collection of mixed objects and ask the child to sort them by type (e.g., toys vs. books) or attributes (e.g., size, shape).

  — Advanced Classification: Combine multiple criteria (e.g., sort objects by both colour and shape).

  These concepts build a strong foundation for cognitive and sensory development, helping children understand their world and function effectively within it.

  You have also read about the various tactual aids that can be used while conducting these activities. These aids can be easily made at home by adapting the existing material. Using the tactual aids, the parents, family members and teachers can carry out a variety of activities with the visually impaired child to help her develop a number of concepts, which is essential for her to understand the world around her.

13.18 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

1) Body awareness refers to the ability to identify one's body parts in relation to the self and the environment.

2) Freedom of movement as well as freedom in feeling one's body should be encouraged from the very beginning so as to help the child become aware of her body. Allow the child to feel the bodies of other family members as well.

   Activity 1

   Touch the parts of the child's body and name (label) them. Help the child to touch her body parts.

   Activity 2

   Any activity that provides an opportunity to use one's body part helps in developing body awareness. For example, ask the child to raise her arm

3) a) herself; b) objects; c) objects with other objects

   d) morning e) sooner f) far; close g) on; under

4) Spatial awareness refers to the ability to understand that objects occupy space and that one has to plan one's own actions accordingly.

Check Your Progress Exercise 2

1) It is necessary to introduce the children with visual impairment to concepts related to the environment and things around them. It will enhance their knowledge about their surroundings and will also enable them to have more control over what goes in around them. One can introduce them to many aspects of their environment through play activities to strengthen concepts related to physical, biological and social environment.

2) Activities like stretching, kneeling down, running, jumping, and crawling help children develop both gross and fine motor skills. These movements enhance their awareness of body parts and how to use them effectively. By engaging in such physical activities, children improve their coordination and control over their bodies, which is crucial for performing everyday tasks. For instance, crawling and dragging toys help build upper body strength, while kicking a ball and jumping improve lower body strength and balance. These skills are foundational for performing daily activities like dressing and feeding independently.

3) One-to-one correspondence is the understanding that each item in one set must be matched with exactly one item in another set. This concept is crucial for counting and measuring. For a child with visual impairment, one-to-one correspondence can be taught through activities such as setting up plates for each person at a meal or ensuring each child has a sheet of paper for drawing. By engaging in these activities, the child learns to match items in two groups, thereby reinforcing the concept of quantity and organization.

4) An activity to help children with visual impairment understand measurement through temperature differences involves pouring a liquid into a container. The child touches the outside surface of the container to feel the temperature changes as the liquid level rises. By noting that the container's surface becomes warmer or cooler with varying liquid levels, the child develops a sense of how much liquid is in the container. This hands-on experience provides an understanding of measurement by associating the temperature changes with the liquid's volume.

Check Your Progress Exercise 3

1) To help a child with visual impairment understand the concept of texture, you can use a variety of materials with distinct textures. For example:

   i) **Materials**: Collect pieces of cloth or materials with different textures such as velvet, cotton, wool, and silk. You can also use objects like sandpaper, felt, and rubber.

   ii) **Activity**:

   - **Initial Exploration**: Cut the materials into pieces of similar size and shape. Place them in a container and let the child feel each piece.
   - **Sorting Task**: Ask the child to group the materials based on their texture. For instance, they could be asked to separate all the soft fabrics from the rough ones.
   - **Matching Activity**: Use cards with different textures attached. Let the child feel these cards and then match them to similar textured materials from the container.

   iii) **Complexity Increase**: As the child becomes familiar with textures, introduce more complex activities where the child has to consider both texture and shape. For instance, cut pieces of cloth into different shapes and ask the child to group them by texture first and then by shape.

2) To teach the concept of colour to a child with visual impairment, associative learning can be used to connect colours with familiar objects and their attributes.

   Activity Example:

   i) **Materials**: Collect objects that are commonly associated with specific colours, such as a black crow, white milk, green leaves, and brown bark.

   ii) **Activity**:

   - **Association Introduction**: Start by showing the child the real objects or tactile representations of these objects.
   - **Description and Association**: Describe the colour associated with each object. For example, tell the child, "This is a black crow, and black is the colour we associate with it. Black is the colour of the crow's feathers."
   - **Interactive Matching**: Provide the child with cards or objects

of different colours. Ask the child to match the colour cards with the objects they have learned about. For instance, ask them to match a card representing the colour black with the object of a crow.

- **Reinforcement**: Use repeated exposure and practice to reinforce the association. For example, frequently discuss and connect the colour black with other black objects the child encounters.

3) Classification involves grouping objects based on shared characteristics. It begins with simple tasks and progresses to more complex activities involving multiple criteria.

Progression from Simple to Complex:

i) **Simple Classification**: Start with tasks where objects differ on only one criterion. For example, sorting a collection of fruits and vegetables based solely on type (fruits vs. vegetables).

ii) **Complex Classification**:

- ✓ Combine multiple criteria in a more sophisticated way. For instance, provide the child with a set of cards that feature different shapes (circles, squares) and textures (smooth, rough). The child would need to classify the cards first by shape and then by texture.
- ✓ Asking the child to state what is common to a group of objects you have put together is more complex than all the former activities.

Example Activity:

- **Materials**: Provide a collection of various objects like different fruits (apple, banana, grape) and different kitchen utensils (spoon, fork, knife).
- **Activity**:
  - **Initial Task**: Ask the child to sort objects into two groups: fruits and utensils.
  - **Intermediate Task**: Once the child can do this, introduce a further classification criterion such as sorting the fruits by their colour (red apples, yellow bananas) and the utensils by their function (eating utensils vs. cooking utensils).
  - **Advanced Task**: Combine criteria, such as sorting objects by both their function and material (metal spoons, wooden spoons; red apples, green apples).

Through these progressive activities, children develop an understanding of classification and grouping based on shared attributes.

UNIT 14 FOSTERING ORAL LANGUAGE AND COMMUNICATION SKILLS

Structure

14.1 INTRODUCTION

When you talk to persons with visual impairment, what do you notice? Do you notice a difference in their facial expressions, eye movements, gestures and postures as compared to sighted persons? They often do not use appropriate gestures and expressions during their conversations. They may also show certain specific mannerisms while speaking, which the sighted do not show. **The difficulty in communication arises because individuals with visual impairment cannot see others speaking and their range of social experience is limited.**

In this Unit, we shall analyze these difficulties experienced by persons with visual impairment, and also look at ways in which parents, family members, teachers and others can foster the development of oral language in the children with visual impair, particularly during the critical early years of life. In the next Unit, we will focus on reading and writing of language. In case of children with visual impairment this means reading and writing of braille.

Objectives

After studying this Unit, you will be able to:

- state the importance of language and communication;
- describe and plan activities to foster the child's listening skills;
- explain how the adults can support the child to adopt appropriate gestures; and
- describe and implement activities appropriate for different age groups that focus on fostering chilren's speaking skills.

14.2 IMPORTANCE OF LANGUAGE AND COMMUNICATION

Communication is a natural way in which people exchange ideas, ask for something from someone, comment on what is happening around them and

express their feelings. It is the exchange of a message between two or more people. It is obvious then that exchange takes place only through interaction among two or more people and cannot take place in isolation.

Language is the primary means of communication. We communicate with others by talking or writing, that is, through verbal (speech) and written language. For example, suppose Reshma says to Mohini, "I am feeling sad." In this case, Reshma is sending a message that is meaningful to both; Mohini understands what Reshma wants to convey to her. Along with talking (using speech), we also use gestures, signs and facial expressions to communicate what we are feeling. The way we stand and sit while conversing also communicates our feelings and intentions. This is called body language. For example, when the mother says, "Meena, come HERE", the mother's facial expression and body posture confirms that she is angry with Meena.

Similarly, in addition to the words, "I am feeling sad", the expression on Reshma's face also communicates to Mohini that Reshma is feeling sad. **Thus, language has three components — verbal (speech), written, and non-verbal clues (body language).**

As you know, children learn languages quickly and spontaneously. We do not consciously seem to teach children verbal or non-verbal language. Hence, we do not think of language development as something that takes place in a sequence. However, there are distinct stages in the development of the language of the child. These are crying (0-1 month), cooing (1month -7 months), babbling (6-12 months), utterance of the first word (12 months), and two-word sentences (18 months-2 years). The earliest form of communication that a child uses is crying. From birth to round one month of age, this is about the only sound the baby produces to communicate her distress and discomfort. Around one month of age, babies begin to make cooing sounds in addition to crying. Cooing is a vowel-like sound, particularly like 'oooo .. .'or 'boooo ... .'. This stage lasts till about five months after birth. Between six and ten months, the infant begins to babble, she repeats syllables like 'ma', 'da', 'ki', and 'ne' over and over again, making sounds like 'mamama ... .', 'dadada .. .', and 'kikiki...'. This is referred to as babbling. Sometime between ten and twelve months, often around the first birthday, the infant says the first word. Gradually, her vocabulary expands, and between 18 and 24 months of age, the child begins to combine words to form two-word sentences, such as "where Baba" and 'more milk'. As children grow older, their vocabulary increases rapidly. The length and complexity of their sentences also increases and they are able to express their thoughts more clearly.

Children develop language by seeing and hearing others speak. While they imitate the words they hear spoken around them, they also have the ability to combine words in novel ways to frame sentences which they have not heard so far. Children also acquire appropriate gestures, body postures and facial expressions by seeing and observing others as they speak. The more the opportunity children have of hearing and seeing others speak, of exploring the surroundings and experiencing events, the more well developed their language will be. This is true of sighted children as well as children with

visual impairment. However, in the case of children with visual impairment, the absence of sight and the limitations of mobility tend to limit exposure to such experiences. This factor, in turn, might slow down their language development. Further, the problems faced by persons with visual impairment in communicating have an impact on their social relationships as well. The difficult in communication contributes to limited social interaction and experiences. This, in turn, hinders the development of effective communication skills — both verbal and non-verbal. And the inadequate communication may set off a cycle of negative experiences.

This vicious cycle must be broken, or better still, prevented. The family members and teachers can play a key role in this regard.

The development of language skills of the child with visual impairment must be facilitated right from the first few months of life as well as conscious attempts made to enhance the child and social interactions.

Let us first take a look at the kind of activities that promote the language development of the child. Since language is the primary means of communication, these would contribute to better communication skills as well.

14.3 ACTIVITIES FOR FOSTERING LANGUAGE DEVELOPMENT

As a parent/family member/teacher you need to foster language development of a child with visual impairment right from the beginning of infancy. The early years constitute a critical period for development of language, and yet this period often gets neglected in real life because of other pressures that the adults around the child are continuously facing. Support and language related activities need to be provided to the children with visual impairment even during school years and beyond.

Stimulating language development of children with visual impairment includes fostering their listening, speaking, reading and writing skills, just as it does in the case of sighted children. Let us now take a look at some of the activities that foster specific aspects of oral language development – i.e., listening skills, speaking skills and use of appropriate gestures.

14.3.1 Developing Listening Skills

To begin with, just like a sighted child, the child with visual impairment needs to develop auditory discrimination skills for language learning. **'Auditory discrimination' means being able to differentiate the various sounds as one listens to them and to be able to use them meaningfully**. 'Auditory discrimination' skills can also be called **'listening skills'**. For a child with visual disability, the fullest use of the ear is vital. The child with visual impairment has to rely upon the sense of hearing to a greater extent as compared to the sighted. The development of a keen sense of hearing has to be emphasized to enable the child to obtain basic information and understanding about the world, to enable her to live safely and to carry out day-to-day tasks. In context of formal education as well, the child has to rely upon listening skills to a greater extent as compared to the sighted. It is not feasible to expect that children with visual impairment will be provided with all the material that they need in braille (which they can read themselves). Children proceeding to higher levels of education have to learn to use reader and recording services. This means they have to be able to understand the text, as it is being read out aloud by another person, either face-to-face or through an audio-tape (the person reading out the text is referred to as the 'reader'). Unless listening skills are developed adequately, the child may not retain interest in this vital medium and, therefore, will not be able to make use of the opportunities for higher learning.

A child who lacks vision tends to compensate for this deficit by listening with such skill and concentration that she is able to interpret environmental sounds with a great degree of accuracy, and gain information. Family members and teachers will tell you about the child's ability to recognize people by the sound of their footsteps and to gauge their moods with accuracy from the tone of their voices. Nevertheless, to achieve this level of accuracy of listening skills, a child with visual impairment has to be helped to relate the various sounds she hears in her environment with people, objects and events, and she needs training and practice to do this.

The development of a keen sense of hearing is not an automatic process, as it may seem to us. Through specific games and activities, and even during routine day-to-day interaction, the child has to be helped to identify various sounds and understand the meaning of these sounds. Following are some examples of activities that you can carry out with the child with visual impairment to develop her listening skills. As you read the activities, you will find that the same basic techniques that are used for the sighted children can be used for children with visual impairment as well to develop their listening skills. However, there is one difference — the child with visual impairment must be given the opportunity to touch as many of the things as possible, because simply on the basis of her sense of hearing, she will not be able to form a proper concept regarding them. For instance, a sighted child can see a 'chair', and when she hears the sound 'chair', she forms a good idea of what it means. To a child with visual impairment, the spoken word 'chair' is only a sound — she can associate meaning with the word only when she sits in a chair and is able to feel its shape. Recall the discussion on the limitations of using the sense of touch and hearing to form concepts which you read in Unit 7 of Block 1 of the Course 2, BCD -102.

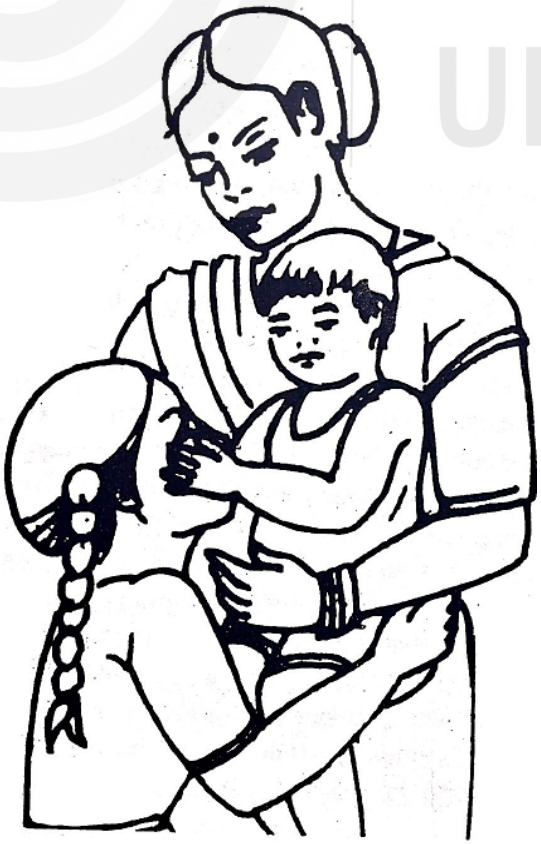
Activity 1

Let the child listen to the following sounds and help her to identify each one. These are only some examples; you can add many more sounds to this list:

- Sound of a spoon in a cup (Take a spoon and rotate it in the cup)
- Sound made by different vehicles
- Sound made when you close or open a book
- The ringing of the telephone bell
- The ticking of a clock
- Sound of the water falling in the bucket; rain drops on the window pane
- Sounds of birds and animals (Let the child listen to, and where possible, touch the animals and birds. Make models of those objects that cannot be touched. As the child touches them, describe them to her so that she relates what she is hearing, with what she is touching.

Activity 2

Encourage people in the family and neighbourhood to interact with the child, so that she hears their voices and learns to identify them by their voice. When someone talks to the child, tell the child who it is. For example, "This is your sister, Manisha, who is talking" or "This is Naina aunty". In this way, the child will learn to associate which voice belongs to which person. As you introduce people to her, ask each person to come very close so that the child can touch the face as you describe the person. Familiarize the child with only one or two new people at a time, she will gradually extend the skill of voice recognition to friends and others in the vicinity.



Activity 3

Make different sounds by clicking your tongue, by clapping, by patting your cheek, by blowing and so on. Explain to the child how you made each sound, letting the child feel your movements as you make it. Encourage the child to make the same sound.

All such efforts will enable the child to identify a wide variety of sounds that she hears in her daily life. Whenever possible, let the child feel the source of sound and describe the sound and the situation to her.

Activity 4

Draw the child's attention to the fact that when we speak, the tone and loudness of our voice varies. The child should be able to discriminate and recognize differences between near and far, high and low, loud and soft sounds. Speak to the child from very close and from a distance, in a soft voice and a loud voice, from different locations in the room, and help her in making the distinction. Draw the child's attention to these aspects when someone else speaks.

Activity 5

Various songs and stories can be used to increase the attention span of the child and also to introduce her to a variety of sounds. After narrating a story, ask the child questions related to the story. You can also narrate half the story and then ask the child to suggest an ending.

Older children may be involved in activities that require them to make proper sentences, use plurals correctly, hear and repeat rhyming words. They may also be encouraged to hear and repeat initial, middle or end sounds of a word. Ask them to suggest words ending with or beginning with a particular sound- for example, make, take, cake, lake.

Check Your Progress Exercise 1

1) What are the distinct stages in the language development of a child, and how do these stages reflect the child's growing ability to communicate?

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2) How does the lack of sight impact the language development of children with visual impairment?

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3) What are some strategies to support children's listening skills?

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4) Describe the importance of body language in communication and provide examples of how body language can complement verbal communication.

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14.3.2 Developing Appropriate Gestures

Gestures are body movements that have meanings and communicate to others. Children begin to use gestures before learning to speak. Gestures are as important as facial expressions when interacting with other people.

Pointing, a common gesture, is a fine motor skill and is an important aspect of language, self-help skills, and hand usage. Teaching the child to point will help her to orientate in space. Children typically develop a larger repertoire of gestures (such as nodding, reaching, pointing) if they have some vision and can observe gestures used by others – they learn by imitating other people's

gestures. However, children who are blind, need encouragement to learn gestures. Learning of conventional gestures should be encouraged, as per one's culture. Some common gestures that should be taught are — nodding to indicate agreement, shaking the head to indicate disagreement or refusal, or pointing towards or tapping an object to direct attention or make a request.

The greatest difference in gestures between the blind and sighted children is the gesture of pointing. It is almost totally absent in children who are blind. Children who are blind do not use their index finger to point. They use a different type of gesture to indicate a line of direction, such as an open hand. **Therefore, in order for pointing to develop, pointing needs to be explicitly encouraged and taught to children who are blind.** To use pointing to express desires and requests, a child must have repeated experiences with activities that promote pointing.

Children who are blind or low vision can be taught to learn to point by feeling the gesture. Children develop gestures through active participation in everyday activities. There are many activities that teach the gesture of pointing.

Activity 6

Parents and educators can teach pointing by using their child's body to play games. They can ask, "Where's your mouth?" and then help the child to point to her mouth with her finger. This can become a game as parents continue identifying and pointing to body parts on each other.

Activity 7

Parents and educators can also use a sound activity that will promote pointing and an awareness of other people and things in the surrounding environment. For example, the parent can take the child's hand to point to a favourite sound toy using a hand-over-hand or hand-under-hand approach. Parents can activate a sound making toy and wait for the child's response, then take the child's hand to point and touch the toy (hand-over-hand approach). You will read in detail about hand-over-hand technique and hand-under-hand technique in Unit 21 of this Course BCD-103.

Gradually the parents should lessen their assistance and just touch the child's hand, or gently support or guide the child's elbow as the child continues to explore and learn. Let the child know the toy is within arm's reach as this will help increase her awareness that objects exist in her environment and reinforce pointing. Use this approach to encourage the child to point towards familiar people like Mother, Father, siblings, and pets. This will be fun and will provide practice with pointing within the daily play routine.

Activity 8

Help the child with visual impairment to learn the communication role of each body part, head to toe. This will make the child's nonverbal communication respectful and friendly. **This can be labeled "head-to-toe listening."** Here are the basics to teach.

- **Head:** Your head, while upright, should be directed toward the speaker and you can occasionally nod in agreement.
- **Eyes:** Eye contact is made or appears to be made. To avoid looking too intense, you can look away from time to time.
- **Mouth:** If the conversation is positive, light-hearted, or friendly, do not forget to smile! A genuine smile is warm and inviting. It helps to brush and floss after a meal. If in doubt, ask a good friend if there is any food on your teeth!
- **Shoulders:** Shoulders are held upright, exuding confidence and alertness.
- **Arms:** To emphasize a comfortable and confident self, arms should be by your side instead of crossed over the chest.
- **Hands:** People generally use their hands while they speak. The purpose of using hand gestures is to emphasize on important words without distracting from the spoken message. Hand movements should be relatively firm, instead of loose or too stiff. Repetitive hand movements are generally distracting.
- **Legs:** Stand at least one arm's-length distance from the speaker with a comfortable, shoulder-width stance. Two people in conversation rarely stand directly in front of one another but usually angled toward one another.
- **Feet:** Feet pointed toward a speaker at a 45-degree angle can be interpreted as interest. Feet pointed away from a speaker will likely be interpreted as a desire to walk away.

14.3.3 Developing Speaking Skills

In order to develop language, the child needs to hear language around her. **The following are three basic strategies that you can use to support the child's language development right from the earliest months.**

1) Model appropriate language

This means that the people around the child should use language appropriately and in the correct way so that she learns as she listens to them.

2) Practice turn-taking

Speaking requires us to take turns – one person speaks and the other listens. And then the roles are reversed. Most of our activities require turn taking. You can engage the child in a game to develop the ability to take turns. A simple activity to teach interactive skills, sharing with others, and learning to wait patiently is as follows: A simple sound-producing toy that can be operated with minimal assistance and which has a definite cycle that clearly marks the end of a turn, such as a music box, electronic toy, or jack-in-box can be used. Tell the child to play it once and then wait for the other person to play it. In this way two or three people can take turns to play the toy.

3) Embed language into the child's experiences to the maximum extent

By embedding language we mean, 'using language in context of ongoing activities, routines and transition from one activity to another.' In this way you can provide an active language-rich environment to the child where the child has many opportunities to hear and use language throughout the activity or routine which makes sense to the child. This strategy can be followed by parents at home as well as early childhood educators in preschools. This becomes more important in case of a child with visual impairment as the child is not able to see and is therefore not able to spontaneously acquire and learn concepts which the sighted are able to do. When language is made a part of child's activities at the home and the preschool, including routine activities like mealtimes, or getting ready, then the child develops concepts and learns the related vocabulary and grammatical structures spontaneously. Also she finds the language use purposeful and meaningful as the child is involved in that activity.

The following are some ways in which you can embed (include) language during activities:

- ✓ **Self-talk:** The adult talks about what she or he is doing, seeing, or hearing by using short sentences. For example, when making a tower with wooden blocks while playing with the child, the teacher/ parent can describe the action she is doing by saying, "I think I will put the small block on top of the big one. Then the blocks will not fall…. Now you put the next block." Along with speaking out aloud, the teacher will need to make the child hold the big and the small block in her hands so that she can feel the difference. In the same way the teacher can describe the child's action even if the child does not speak out herself. For example, when the child picks up the block of the right size, she can say, "I like your idea of keeping the big block first. It is heavier." The child learns concepts of size and weight and also the related vocabulary.
- ✓ **Expansion:** This means taking what the child says and adding the missing words or grammar. You extend what the child is already saying, by repeating the information in adult-like language and adding new information. In this way the child's brief expression can be turned into a full expression. For example, when the child says, 'T shirt' in response to your question, "What do you want to wear today?", you can expand the child's response and say, "You want to wear the T shirt with pants today. Which one will you wear – with half sleeves of full sleeves?"
- ✓ **Commenting and Modeling:** When the child or other children are engaged in an activity, you can comment on it. For example, during mealtime at the preschool you can comment on the food and say, "Radha has brought a tomato sandwich for lunch and Manoj has got an egg." This can also encourage other children to state what they have brought. To take another example, when children are working with clay you can say, "The clay is really soft and it will be easy to roll it into different shapes. Raghav has made a long string with the clay! That is good." Questions can be used to elicit information from the child about what they know and what needs to be modeled.

Let us now read about some activities to foster speaking skills for specific age groups.

a) **Activities for the age group birth to 2 ½ years**.

Activity 9

If you converse with a three-month-old infant who can see, you will find that she gives a response either by moving her body or through an expression, such as smile. The infant may also produce a cooing sound, such as 'oooo'.

The infant with visual impairment may not smile at you or show any facial expression due to lack of vision, but she can respond to your speech by making sounds.

Talk and interact with the child in the course of routine daily activities.

During feeding, bathing, dressing, undressing and playing, talk with the child with visual impairment. Talk about what you are doing with the child from the earliest months, since the child with visual impairment relies primarily upon her sense of hearing to know what is going on. Since the child cannot see objects, she needs to be told that they are there. When feeding, talk to the child about the food she is eating. As she is bathing, talk to her about the hot and cold water and the soap. When wiping her body and dressing her, talk about the towel and articles of clothing. When you are playing with her, tell her the names and colours of the toys and objects.

Keep the following points in mind when you talk to the child with visual impairment, whatever be her age:

- Keep the child's developmental level in mind when you communicate — talk about the things the child will understand. In the case of a very young infant, it may seem to you that child does not understand anything — it may also seem foolish to you to talk when the child does not reply. However, continue your playful and lively speaking. By six months of age, the child will start to babble in response to your talk and she will begin to understand what you are saying.
- Always call out the child's name before you speak to her, so that she knows she is being spoken to. Speak directly to the child and encourage her to converse with you further.
- Speak naturally in simple sentences, with no exaggerated movement of lips.
- Use clear speech and language so that the words are clear to the child.
- Do not move or shake your body unnecessarily.
- Repeat the words that need attention.

Activity 10

Some children with visual impairment pick-up spoken language as they hear it. Others may have some difficulty and may not learn to speak at the same age as the sighted children, because they cannot see the way people move their lips when they speak. To help the child learn to speak, begin by putting the child's hand on your mouth and face as you speak. Let the child feel how

your lips, cheeks and jaw move and how the air comes out of your nose and mouth as you speak. Then ask the child to repeat the words you said, moving the lips, cheeks and jaw and blowing the air out of the nose and mouth as you did. Repeat the words if necessary.

Activity 11

Pay attention to the child's vocalizations, even if these are not complete words. Praise the efforts of the child and act upon what appears to be the intended meaning: So if the child says "Ba— while holding the bottle, you can expand and say," "You want your bottle?"

Activity 12

As the sighted infant grows, she reaches out for objects and toys around her spontaneously. However, when the child cannot see, her motivation to reach for things around her is naturally reduced. Further, since she cannot see objects, she cannot learn their names without help or she may know some words, but not understand what they mean. The following activity will help to generate an interest in toys and objects and help the child to develop vocabulary.

When the infant is able to hold objects in her hands, give her things to hold and describe these to her. By holding the object, the child will form a concept about it using her sense of touch, hearing, smell and taste. As you will describe the object she is holding, she will begin to understand the meaning of words and develop vocabulary. She/he will learn the meaning of words like heavy, light, soft, smooth, rough, deep, shallow, small, big, long, thin, short, narrow, broad, above and below.

Encourage the child to feel objects

Activity 13

Use the following strategy to help the child to relate to a concept (for example, that of milk), and then make use of vocabulary to generate more words and sentences.

For example, if you ask the child, "Have you finished the milk?", the child may reply, "Finished". Repeat the sentence and help her to reply in a full sentence, "Yes, I have finished the milk." Try to frame as many different sentences as you can around the same concept. For example, based on the concept of 'milk', you can frame sentences such as "The milk tastes good", "Neha likes to drink milk" and "Is your milk hot or cold?"

Activity 14

When you speak, let the child touch your face, lips and body to know your expressions and movements. This will help the child to know the gestures and expressions that you use with the particular words. Use your voice in different ways to communicate various expressions and feelings, such as when there is danger or when you are happy. Encourage the child to do the same.

Activity 15

Let the child listen to music. Sing rhymes and songs for the child and encourage her to sing these as well.

Activity 16

By 8-9 months, the child begins to understand more of what you are saying (provided you have been talking to the child fairly regularly during the earlier period). Take the child out with you as you go shopping or visiting relatives, and describe to her what you encounter on the way. When you describe, concentrate on what the child can hear, touch or feel. You too must begin to sense the world with your ears and nose — only then you will be able to describe it to the child in a way in which she understands.

Activity 17

Encourage the child to interact with other family members, neighbours and peers.

Activity 18

Motivate the child to play and talk with other children

Interacting with others facilitates all round development

b) Activities for the age group 2½ years to 4 years

A lot of learning takes place in this period. The child becomes better able to control her body, she also begins to describe what she experiences by seeing, touching and smelling. However, if the parents, family members and teachers do not use much language in communicating with the child with visual impairment, she may continue to speak in two or three word sentences only, instead of full sentences, and will have limited vocabulary.

Besides carrying on with the activities described in the earlier section, you can also do some additional ones.

Activity 19

Like the sighted children, the visually impaired children enjoy listening to short stories. Remember that when you narrate stories, you must use gestures and expressions, and modulate your voice.

Activity 20

Children enjoy experimenting with words, laughing as they make up rhymes. Play games of rhyming words with them. Rhyming is good practice in auditory discrimination, which later plays an important role in learning to read. Many nursery rhymes have rhyming words. You can also make up your own rhymes or even play a game of simply rhyming the words such as cat, rat, mat, bat and so on. Rhymes and songs in the child's mother tongue should be included.

During activities like storytelling, singing, or even playing, rephrase sentences or clarify meanings through action. For example, you can demonstrate the meaning of words like 'behind', 'under', 'over' or 'between' by placing actual objects or persons in these positions and letting the child touch the objects or the persons.

It is important to note that adults and siblings should speak with the child with visual impairment frequently, listen to what they have to say and respond even if their speech or meaning is not quite clear.

Activity 21

Expand descriptions of common objects, e.g. "You're holding the small blue cup" versus "You're holding the cup."

Activity 22

Promote conversations that bring in other people and/or use others to model a language request, e.g. "Mumma, please pat the dog." (This encourages the child to learn about this activity.)

Activity 23

Provide change in the language involved in familiar activities. The sudden switch from the daily dialogue in the same way causes the child to stop and think about new vocabulary and meaning.

c) Activities for the age group 4 to 6 years

You have read that the development of language is closely related to the development of thinking abilities. As the child's thinking capabilities develop, so does her language. Thus, children in the age range of four to six years can name and categorize various items. They can speak in full sentences. They can make up simple stories on their own, choose storybooks and narrate stories. Converse with children with visual impairment as much as possible to motivate their interest and help them to relate things. Make use of pictures, posters, storybooks and magazines to talk to them. You will need to convert these into tactile form, which the children can feel. The storybooks can be converted into braille so that the child with visual impairment can read and enjoy these.

Activity 24

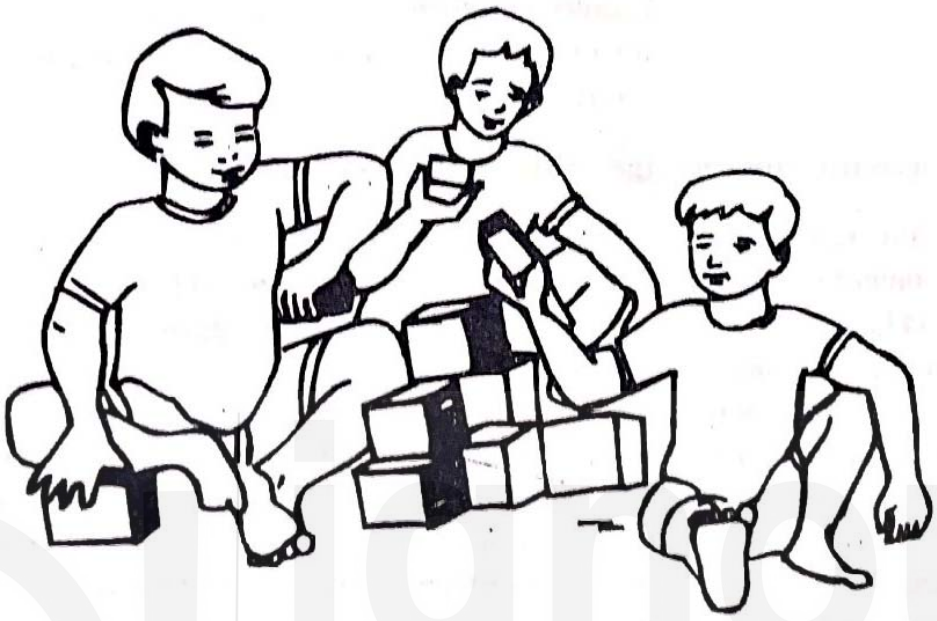
Children enjoy dramatizing. You can make use of soft toys and puppets, such as finger puppets, hand puppets and string puppets to dramatize a story that the child knows. You can also use various items, in the house, such as a shopping basket, grandfather's stick, mother's saree and other items for dramatization. Help the child to dramatize by familiarizing her with the character in the story, its movements and role. Provide her spatial orientation and teach her to express herself through facial expressions.

It will be fun if a group of children dramatize a story together. Encourage them to make-up stories on their own and enact them. You will read about activities to help the child orient herself in space in Units 11, 19 and 20.

Activity 25

Due to lack of vision, children with visual impairment are often discouraged from playing with sand, water and wooden blocks. In fact, the child should be

encouraged to play with these materials in small groups with other children, under guidance. When children play in groups, they converse with each other. For example, when the children play with wooden blocks, they may build railway tracks, houses and so on, and they will talk about them. Thus, such an activity not only fosters language development but also cognitive and social development.



Activity 26

Take the child with visual impairment to different places such as the market, bank, garden, field, religious and historical places, railway station, airport, and factories. Visit to such places helps the child to listen to conversations between persons and to know what happens in these places. When you come back, ask the child to describe what she heard and experienced, as it is only through extensive use of language that the child will be adequately prepared for reading and writing and for formal schooling.

Many skills which are helpful for reading are developing at this time. Children can identify words that start with the same sound such as 'fish', 'fan' and 'fruit'.

As children develop this skill, ask them to identity those objects around them whose name begins with a certain sound.

The learning activities should be carried out in a playful manner, so that the child enjoys them and learns spontaneously. Extensive formal training at this stage can destroy a child's interest in learning. A good command over language and the ability to formulate and express ideas is the best preparation for academic learning, and for social interactions.

Activities to foster language development of the child should be playful and enjoyable.

Taking turns to convey one's ideas helps to develop listening and speaking skills

Check Your Progress Exercise 2

1) How can parents and educators teach the gesture of pointing to a child who is blind, and why is it important?

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2) What strategies can be used to support language development in a child with visual impairment from birth to 2½ years?

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3) How can a child with visual impairment be encouraged to interact and communicate with others between the ages of 2½ and 4 years?

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14.4 SUMMING UP

In this Unit, you have read that language is the main means of communication. In the case of children with visual impairment, the absence of sight, limitations of mobility and limited social interactions may tend to adversely affect the development of language and communication skills. In fact, difficulty in communication and limited social experiences often form a vicious cycle, which needs to be broken, and if possible, prevented. One needs to consciously stimulate language development of the child, as well as facilitate development of social relationships.

Many activities can be planned and conducted for fostering language development. In this Unit, you have read about activities that help to foster listening and speaking skills and use of appropriate gestures.

A) Developing Listening Skills

Identifying Sounds: Expose the child to various everyday sounds like a spoon in a cup, vehicle noises, a book opening, a ringing telephone, and the ticking of a clock. Encourage the child to identify these sounds and describe them using touch or models if necessary.

Recognizing Voices: Help the child learn to recognize different voices by introducing them to family and neighbours. Ensure that the child can touch the person's face while being introduced, which helps in associating voices with faces.

Making and Identifying Sounds: Create different sounds using clapping, clicking, or blowing. Explain the sound-making process to the child and let them try making similar sounds themselves.

Differentiating Sounds: Teach the child to distinguish between various tones, volumes, and distances of sounds. Speak to the child from different distances and in varying volumes to help them understand these differences.

Stories and Rhymes : Use songs, stories, and rhymes to extend the child's attention span and introduce them to different sounds. Engage the child by asking questions about stories or having them suggest endings.

B) Teaching Gestures

- **Pointing:** Use games to teach pointing, like asking the child to point to body parts or sound toys. Use hand-over-hand assistance initially and then gradually reduce support.
- **Body Parts Communication:** Teach the child the communication role of body parts like the head, eyes, and hands, explaining their uses in interaction and communication.

C) Developing Speaking Skills

- **Infants:** Talk to the child during daily activities, describe what is happening, and encourage them to make sounds in response.
- **Encouraging Speech:** Help the child feel how lips and jaws move during speech and encourage them to replicate these movements.

- **Vocalizations:** Respond to and expand upon the child's vocalizations to foster language development.
- **Describing Objects:** Let the child feel and describe objects, helping them build vocabulary through touch and description.
- **Interactive Communication:** Let the child engage with others and describe their experiences to enhance their language skills.

Age-Specific Activities

- **Birth to 2½ Years:** Focus on verbal interaction during routines, describe objects and experiences in detail, and encourage vocalizations.
- **2½ to 4 Years:** Use stories and rhymes, expand descriptions of objects, and engage in conversations involving others.
- **4 to 6 Years:** Encourage dramatization, play with different materials, and visit various places to enhance descriptive and conversational skills.

Encouraging Play and Exploration

- **Play with Materials:** Encourage play with sand, water, and blocks to promote language through social interactions with peers.
- **Visits to Various Places:** Take the child to different environments like markets or parks to broaden their experience and vocabulary.

These activities aim to enrich the child's language development through varied sensory experiences, interactive communication, and structured play, fostering both verbal and non-verbal communication skills.

Building on the numerous examples of such activities given in the Unit, the parents, family members and teachers can carry out a variety of language stimulation activities.

14.5 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

1) The distinct stages in the language development of a child are:

   i) Crying (0-1 month): This is the earliest form of communication where the infant uses crying to express distress and discomfort.

   ii) Cooing (1-7 months): At this stage, the infant starts making vowel-like sounds such as 'oooo...' or 'boooo...', which are a precursor to more complex sounds.

   iii) Babbling (6-12 months): The infant begins to repeat consonant-vowel combinations like 'mamama...' or 'dadada...', which helps in developing the foundation for words and speech patterns.

   iv) Utterance of the First Word (12 months): The child starts to say their first recognizable word, marking the beginning of meaningful verbal communication.

   v) Two-Word Sentences (18 months-2 years): The child starts combining words into simple sentences like "more milk" or "where Baba," indicating an advancement in language use and sentence formation.

These stages reflect the child's growing ability to communicate as they progress from expressing basic needs and emotions through crying to using more complex verbal structures and combining words meaningfully.

2) The lack of sight impacts the language development of children with visual impairment in several ways:

- **Limited Exposure:** Children with visual impairment may have reduced exposure to visual stimuli and interactions, which can limit their experiences and the development of language.
- **Delayed Concept Formation:** The process of forming concepts based on auditory and tactile information takes more time. Since concept development is delayed, so language development is also affected.

3) Strategies to support listening skills

i) **Sound identification:** Engage the child in activities that involve identifying and differentiating various sounds, such as the sound of a spoon in a cup or different animal sounds.

ii) **Familiarizing with Voices:** Encourage interactions with family members and others to help the child identify and associate voices with people, aiding in voice recognition and social interaction.

iii) **Sound-Making Activities:** Allow the child to make and identify different sounds through activities like clicking, clapping, or blowing, and explain how these sounds are produced.

iv) **Tone and Volume Discrimination:** Help the child distinguish between different tones and volumes of sounds, such as speaking softly and loudly from various distances.

v) **Using Songs and Stories:** Use songs and stories to improve attention span and language comprehension, and engage the child in discussions and questions about the content.

These strategies aim to compensate for the lack of visual input by enhancing the child's auditory and tactile experiences, thereby supporting overall language development.

4) Body language plays a crucial role in communication by providing non-verbal cues that complement and enhance verbal messages. It includes gestures, facial expressions, and posture, all of which can convey emotions, intentions, and attitudes that might not be fully expressed through words alone.

Examples of how body language complements verbal communication include:

i) **Facial Expressions:** When Reshma says "I am feeling sad," her facial expression of sadness helps Mohini understand the depth of Reshma's emotions beyond the words.

ii) **Posture and Gestures:** If a mother says, "Meena, come HERE" with an angry tone, her body posture and facial expression (e.g., frowning, crossed arms) reinforce the message that she is upset with Meena.

iii) **Gestures:** A person might use hand gestures to emphasize a point while speaking, such as pointing to an object to clarify what they are discussing or using gestures to illustrate actions or directions.

Body language provides additional context and emotional depth to verbal communication, making interactions more effective and expressive.

Check Your Progress Exercise 2

1) Parents and educators can teach the gesture of pointing to a child who is blind through various activities. One method involves using the child's own body to play games, such as asking the child to point to different body parts. Another approach is to use sound-based activities, where the parent guides the child's hand to point at a sound-producing toy using hand-over-hand or hand-under-hand techniques. Gradually, the amount of assistance is reduced to encourage independent pointing. It's important to teach this gesture because pointing is a crucial part of communication that helps in orienting in space, making requests, and directing attention. Since children who are blind do not naturally learn this gesture through observation, explicit teaching is essential for their communication development.

2) For children with visual impairment from birth to 2½ years, several strategies can support language development:

   i) **Talk During Daily Activities**: Engage in conversation during routine activities like feeding, bathing, and dressing. Describe what you are doing and the objects involved to provide the child with context and vocabulary.

   ii) **Touch-Based Learning**: Encourage the child to touch your face, lips, and body as you speak. This helps the child understand the physical aspects of speech production and the expressions associated with different words.

   iii) **Respond to Vocalizations**: Pay attention to the child's vocalizations and praise their efforts. Expand on their attempts by repeating and modelling the intended message.

   iv) **Object Exploration**: Give the child objects to hold and describe them. This tactile exploration helps the child form concepts and learn new vocabulary related to the objects.

3) To encourage a child with visual impairment to interact and communicate with others between the ages of 2½ and 4 years, the following activities can be beneficial:

   i) **Storytelling with Engagement**: Narrate short stories with expressive voice modulation and use gestures to engage the child. This helps in understanding narrative structures and emotional expressions.

ii) **Rhyming Games**: Play games involving rhyming words. Rhyming supports auditory discrimination and language development by helping the child recognize patterns and sounds in language.

iii) **Descriptive Language**: Expand descriptions of common objects and activities. For example, instead of just saying "cup," say "small blue cup" to enhance the child's understanding and vocabulary.

iv) **Social Interaction**: Promote conversations involving other people and model language requests. Encourage the child to interact with family members and peers to practice and reinforce communication skills in social contexts.

UNIT 15 PROMOTING SOCIAL DEVELOPMENT AND ACQUISITION OF SOCIAL SKILLS

Structure

15.1 INTRODUCTION

Social skills refer to the abilities and behaviours that enable people to interact effectively and harmoniously with each other in daily situations. We can say these are the tools that we use to interact appropriately with other people. As you know there is a particular way of behaving in every social situation. In other words, in every social setting, there is a particular social convention of interacting with each other.

In this Unit, you will read about the importance of developing social skills in children with visual impairment as well as some activities that can help you to develop these skills in children.

Objectives

After studying this Unit, you will be able to:

- state some of the social skills that we must develop;
- explain the importance of developing social skills;
- describe the impact of visual impairment on the development of social skills;
- explain the strategies for strengthening social skills; and
- plan and implement activities for developing the child's social skills during early years.

15.2 SOCIAL SKILLS AND THEIR IMPORTANCE

Social skill competence means using non-verbal and verbal communication skills according to the social conventions of a particular setting. Let us understand this through an example.

A child who has acquired the skill of greeting others selects the appropriate verbal communication. She chooses the appropriate greeting depending on

the person to whom she is speaking, the time and the place. For example, at school when greeting a teacher the child says, "Good Morning, Ma'am!" whereas when greeting a peer the greeting might be "Hi, Meenakshi!"

Using the right words is not enough. It is important that the words are said in the right way so that the nonverbal communication matches the words. The skill of nonverbal communication includes using appropriate eye contact (looking at the person); facial expression (smiling); proximity (standing at an appropriate distance to the teacher); posture (holding yourself in a way to indicate interest); voice (using an audible voice); use of hands (giving a 'Hi Five' to a friend while saying 'Namaste' to Elders)

15.2.1 Why do We Need to Develop Social Skills?

- Most of our activities require us to engage with people and therefore social skills are required for pleasant and successful interaction. In other words, these skills help us to engage in effective interpersonal communication, build and maintain positive relationships and resolve conflicts.
- Social skills are also the foundation of all other developments. All children including those with vision impairment, need to interact with people to acquire language, cognitive concepts and skills, appropriate emotional behaviours as well as school readiness. When the child displays appropriate social skills, children and adults are more willing to interact with the child and as a result the child's development in all domains is fostered.
- Appropriate social skills help a person to be better accepted by others and be integrated in society.

Therefore it is important to focus on development of appropriate social skills from the early years itself. Further, social skills can be learned and improved with practice. Learning how to use these skills is a life-long process. Based on the feedback we receive from others in every social encounter, we can and must continuously refine, improve and adapt our skills according to the expectations of people and the norms of that situation. Social skills are essential for experiencing a satisfied life and so one must invest in improving them.

15.2.2 What are Some of the Social Skills that We Must Develop?

Some of the social skills we must develop are:

- Observation (it helps in understanding the social situation);
- active listening (i.e., paying attention to what the person is saying); the ability to understand and respond to social cues;
- mirroring (copying another person's body language, speech, facial expression. It is a way of showing that the listener is experiencing what the speaker is feeling and conveying. Mirroring body language is a non-verbal way to show empathy);

- emotional regulation (i.e., expressing your emotions appropriately through words and gestures and expressions);
- verbal and nonverbal communication; and
- Relationship management which involves cooperation, assertiveness, conflict resolution, and empathy.

In context of the young child social skills, like learning how to play with others and taking turns, are very important.

These skills are crucial for successful interpersonal communication and help us in both personal and professional life because they enable us to deal with various social situations, build and maintain relationships, and resolve conflicts. For example, individuals who can efficiently communicate their ideas are more likely to be successful in their careers. Likewise, those who can resolve conflicts are better equipped to maintain positive relationships.

15.3 IMPACT OF VISUAL IMPAIRMENT ON SOCIAL SKILL DEVELOPMENT

As you can understand, communicating is not just about using the appropriate sounds, words and sentences to express a particular message. It is about knowing how and when to communicate the message appropriately according to social conventions.

Sighted children learn most of the social skills required for everyday social interactions through observing others, imitating (i.e., modeling) their behaviours and then modifying these behaviours as per their own interaction style. For example, the child observes how the teacher responds when two children want to play with the same toy, how she helps them to understand that they can take turns to play with the toy. In this way the child observes and learns that co-operation and sharing is desirable. A little earlier we gave the example of how the child learns to use appropriate greetings and body language and gestures based on whether the child is talking to a friend or a teacher.

When a child has vision impairment, she is not able to receive and use information about and through the environment. One of the major limitations is that the child is not able to see the behaviour of others based on which she could have developed her own social skills. In other words, she does not have a visual model. Another limitation is that while the other senses provide information about the environment but it is not to the same degree of accuracy as with the sense of sight. While the tone of voice and sense of touch may provide some information about what the other person is thinking and feeling but it is difficult to interpret accurately and many times impossible to interpret. This can make social interaction difficult. Therefore, **it is crucial that children with vision impairment are provided with social skills training to learn how to (a) behave in a socially acceptable manner, and (b) learn how to interact with others.**

15.4 STRENGTHENING SOCIAL SKILLS

Early social experiences play a dominant role in determining the child's social, language and cognitive development. The attitude of the child's parents, brothers, sisters, grandparents and other relatives who come in constant contact with her during the early formative years of life, towards the child determines the degree of her adjustment at home and outside the home. The ways of interaction of these significant people in the child's life set the pattern for the child's her attitudes towards people, events and things in general.

Strategy 1

Interact with the child in a positive manner from the very beginning. Even though the newborn baby is too young to vocalize (that, as you know, starts around one to two months of age), you may be rewarded by a slight smile or the alert look on the baby's face, when she stops everything else to concentrate on you, all her senses directed at you. This indicates that she is interacting with you. These early experiences lay the foundation for all future developments.

Strategy 2

As the primary caregiver, the mother should talk to the baby frequently, hold her close and let the baby explore her face and body, guiding her hands when she begins doing so. The child has to form a mental idea about the mother (and other people later on) — that means that she must integrate the sound of her voice, her approaching steps, the feel and smell of her body, into one experience — the mother. The sighted child is at an advantage; even if the mother does not talk much with her, she has a strong visual image of her. But in case of children with visual impairment, if the mother (and other people) were not to converse with the child, she has less information which she can use to develop the concept of the 'mother'.

The larger the number of people who interact meaningfully with the child, the better will be the child's development in all areas.

Strategy 3

By the fourth or fifth month, the baby makes anticipatory adjustments, like lifting up of the arms, to being picked up. At this stage, all children should be picked up frequently. The child with visual impairment makes a similar response to the person who speaks to her. If the child is frequently spoken to, she is able to differentiate between, smiling, angry, unfriendly and loving voices. The family members should interact frequently with her, and hold her more often, than they might have in the case of a sighted child.

Strategy 4

The caregivers should take the infant outdoors for sometime every day. When the child is able to walk, she should be encouraged to explore the neighbourhood. The family members should describe to the toddler and the preschooler, the people who live in the houses nearby, especially those of her age and facilitate her interaction with them. The child should be included in all social activities.

Ensure that the child enjoys the variety of social experiences and interactions that are available to a sighted child. One needs to just think of all the social experiences and interactions that the child would have had if she was not visually impaired, including playing with friends, visiting relatives, participating in festivals and attending weddings. Far from keeping the child homebound, one must try to ensure that the child with visual impairment enjoys all these experiences.

When the child is included in social activities, the child feels emotionally and socially supported, develops a feeling of security, develops positive self-esteem and becomes confident of taking on challenges that are going, to come her way.

Strategy 5

In order to develop good social skills the child needs to have several opportunities to observe and practice these skills within a particular context. Direct teaching (coaching) by and interaction with caring adults are important ways that children learns these skills. Learning social skills takes time and practice.

Playing with children of one's own age helps to develop social skills

The more opportunities the child has to practice and communicate with a variety of people, the more flexible and sophisticated her social skills will become. Hence, it is important for parents and teachers to not only focus on the child with visual impairment, but also, to consider the social environment. The way others respond to and interact with or do not interact with the child with visual impairment, can directly affect the development of social skills, self-concept and overall well-being.

15.4.1 Some Specific Activities for Developing Social Skills

Activity 1

Play games or sing songs that children can sing with you, copying your sounds and body movements. Sing favourite songs over and over again. Children enjoy repetition and songs help children to express emotions.

Activity 2

Read books and tell stories to children. You might say, "Remember when we did ____? This is what they are doing in this story as well." Stories help the child to understand and manage emotions.

Activity 3

Ask the child to pick up a toy or stuffed animal. Then you take it from the child and hide it somewhere and ask the child to find it. You can give verbal instructions to help the child to find the object. This helps to develop the skill of turn taking, aprt form developing vocabulary and space related concepts.

Activity 4

Remember and recall some past events together with the child. Name the people and talk about what was taking place at the time. Emotions and feelings are associated with events. When the child talks, you can ask her to state how she felt at that time, could she make out how the others felt and how did she understand so.

Activity 5

You and the child sit some distance from each other. Take turns rolling a toy car or ball back and forth between the two of you. Talk about what you are doing as you play this sharing activity together. This activity helps to develop the idea of turn taking.

Activity 6

Play games with children, such as taking turns to jump off the bottom step, kicking a ball or blowing bubbles. Taking turns is essential to good social skills.

Activity 7

Play make-believe with stuffed animals and toys. Take turns telling a simple story with the animals or toys. Even a young toddler can share by telling a story, even if you do not understand the words she is trying to say. It is fun and builds early communication and language skills.

Activity 8

Take turns handing toys back and forth to each other. Name the toys as you pass them. Add the words "please, can you give me the toy" and "thank you" as you pass the toys.

Activity 10

Encourage the child to help you in keeping the toys back into the shelf after playing with these. Let the child know when you appreciate what she is learning to do and when she is helping, such as picking up toys or bringing their plate to the sink.

Check Your Progress Exercise-1

1) What role do social skills play in a child's overall development and integration into society?

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2) How does visual impairment affect a child's ability to develop social skills, and what strategies can be used to address these challenges?

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3) Describe the importance of observation and active listening in developing social skills in children.

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4) Fill-in-the-Blank Questions:

   i) Social skills are essential for engaging in pleasant and successful interactions, building positive relationships, and resolving ……. .

   ii) Children with vision impairment face challenges in developing social skills due to a lack of …… models and difficulties in interpreting social cues.

iii) Frequent verbal interactions help the child recognize different vocal tones and …… cues.

iv) Engaging in repetitive ……. and games helps children express emotions and develop ear communication skills.

14.5 SUMMING UP

Understanding Social Skills:

Social skill competence involves using both verbal and non-verbal communication appropriately according to the social context. For example, a child greets a teacher with "Good Morning, Ma'am!" and a peer with "Hi, Meenakshi!" Effective communication also requires matching non-verbal cues, such as eye contact, facial expressions, and posture, to the words spoken.

Importance of Developing Social Skills:

1) Effective Interaction: Social skills are essential for engaging in pleasant and successful interactions, building positive relationships, and resolving conflicts.
2) Foundation for Growth: They are crucial for language acquisition, cognitive development, emotional behaviors, and school readiness.
3) Social Integration: Proper social skills enhance acceptance and integration into society. They contribute to a well-rounded development, and continual practice helps refine these skills throughout life.

Key Social Skills to Develop:

1) Observation: Understanding social situations through observation.
2. Active Listening: Paying attention and responding appropriately to others.
3) Mirroring: Reflecting another's body language and expressions to show empathy.
4) Emotional Regulation: Appropriately expressing emotions through words and gestures.
5) Communication: Both verbal and non-verbal.
6) Relationship Management: Includes cooperation, assertiveness, conflict resolution, and empathy.

Impact of Visual Impairment on Social Skills:

Children with vision impairment face challenges in developing social skills due to a lack of visual models and difficulties in interpreting social cues. They miss out on visual learning and often require direct instruction and alternative methods to develop social skills.

Strategies for Strengthening Social Skills:

1) Positive Interaction: Begin with positive interactions from birth, even if the baby cannot vocalize.
2) Frequent Communication: Regularly talk and hold the baby to help form concepts of people.

3) Responsive Interaction: Frequent verbal interactions help the child recognize different vocal tones and emotional cues.
4) Inclusive Experiences: Encourage outdoor exploration and social interactions to expose the child to a variety of experiences.
5) Opportunities for Practice: Provide ample opportunities for practicing social skills through direct teaching and varied social interactions.

Specific Activities for Developing Social Skills:

1) Songs and Games: Engage in repetitive songs and games to help express emotions.
2) Storytelling: Read and discuss stories to help understand and manage emotions.
3. Turn-Taking Games: Play games that involve finding objects or taking turns to develop turn-taking and spatial concepts.
4) Event Recall: Discuss past events to help the child connect emotions with experiences.
5) Sharing Activities: Use toys and games to practice sharing and communication.
6) Imaginative Play: Engage in make-believe games to build early communication skills.
7) Toy Passing: Practice politeness and turn-taking by passing toys with added phrases like “please” and “thank you.”
8) Responsibility: Encourage helping with clean-up tasks and acknowledge the child's efforts.

These strategies and activities help children, especially those with visual impairments, build essential social skills, promoting their development and integration into social settings.

14.6 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

1) Social skills are crucial for effective interaction and relationship building. They contribute to successful interpersonal communication, emotional regulation, and conflict resolution. For children, especially those with visual impairments, social skills are fundamental in acquiring language, cognitive concepts, and emotional behaviors. They also facilitate social integration by helping children be accepted and positively interact with others, which supports their overall development and well-being.

2) Visual impairment limits a child's ability to observe and model social behaviors, as they lack visual cues from others. This makes it challenging for them to learn social skills through imitation and visual learning. Strategies to address these challenges include providing direct instruction, offering frequent verbal interactions, and creating opportunities for the child to engage in various social activities. Encouraging inclusive experiences and using alternative methods, such as touch and sound, can help develop these skills.

3) Observation and active listening are key components of developing social skills. Observation helps children understand social situations and norms by watching how others behave and interact. Active listening involves paying close attention to what others are saying and responding appropriately, which helps in understanding and engaging effectively in conversations. Both skills are crucial for recognizing social cues, building relationships, and managing interactions successfully.

4) i) conflicts
   ii) visual
   iii) emotional
   iv) songs