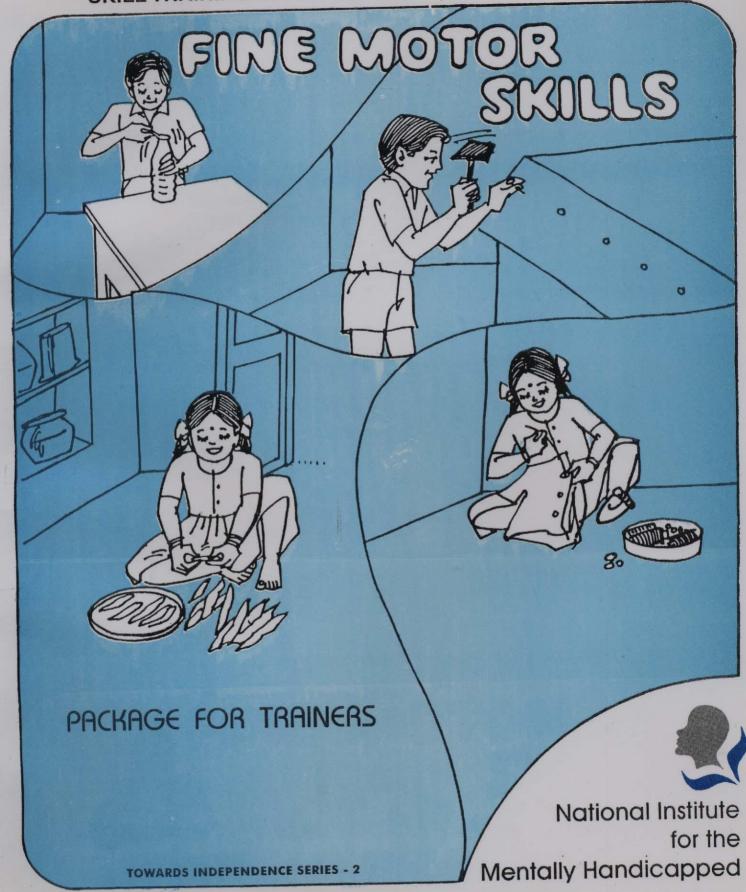
SKILL TRAINING IN THE MENTALLY RETARDED PERSONS



Towards Independence Series - 2

SKILL TRAINING IN THE MENTALLY RETARDED PERSONS

A PACKAGE FOR TRAINERS

FINE MOTOR SKILLS

(Funded by UNICEF)

National Institute for the Mentally Handicapped

(Ministry of Welfare, Govt. of India)

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Contributors :

Jayanthi Narayan M.S. (Sp. Ed.) Ph. D., D.S.Ed. Project Coordinator A.T. Thressia Kutty M.A., B.Ed., D.S.Ed. Research Officer

Other titles in the series :

- ✤ Gross Motor Skills
- ⋇ Eating Skills
- * Toilet Training
- * Tooth Brushing
- * Bathing
- * Dressing
- * Grooming
- ✤ Social Skills

Artist : K. Nageswar Rao

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ABOUT THE BOOKLET

This book is one among the series of books developed for the benefit of the parents and trainers of the mentally retarded and developmentally delayed children. The activities in which these children are to be trained for independent living are very many. Among them, feeding, toiletting, brushing, grooming, bathing, dressing, gross and fine motor activities and socialization are some of the basic and important skills. This series of books provide in a step by step manner, procedures for finding out the delay or deficit in the child and the steps in training them. Simple language is used with appropriate illustrations so that parents and other trainers can easily follow the steps. It should be remembered that the activities listed are some of the basic ones. Common sense and imagination of the trainers will be of great assistance in enhancing the skill in the child. We hope that the trainers find these booklets useful to them.

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Project Advisory Committee

Dr. V. Kumaraiah Associate Professor (Cl. Psy) NIMHANS, Bangalore

Ms. V. Vimala, Vice Principal Balavihar Training School Madras

Prof. K.C. Panda, Principal Regional College of Education Bhubaneswar

Dr. N.K. Jangira Professor (Special Education) NCERT, New Delhi

Ms. Girija Devi Asst. Communication Devt. Officer UNICEF, Hyderabad

Institute members

Dr. D.K. Menon Director

Dr. T. Madhavan Asst. Prof. of Psychiatry

Mr. T.A. Subba Rao Lect. in Speech Pathology & Audiology

Mrs. Reeta Peshawaria Lect. in CI. Psychology

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INTRODUCTION

Coordination of fingers, hands and arms plays a vital role in activities towards independence. Development of small muscles facilitates proper coordination to perform daily activities of life.

Activities such as eating and dressing, manipulation of toys and other playthings and the use of utensils and tools, are largely dependent upon coordination of hands.

Almost all toys and games require the use of hands and arms. These play activities help not only to utilize leisure time properly but also to develop fine motor skills for many day-to-day activities.

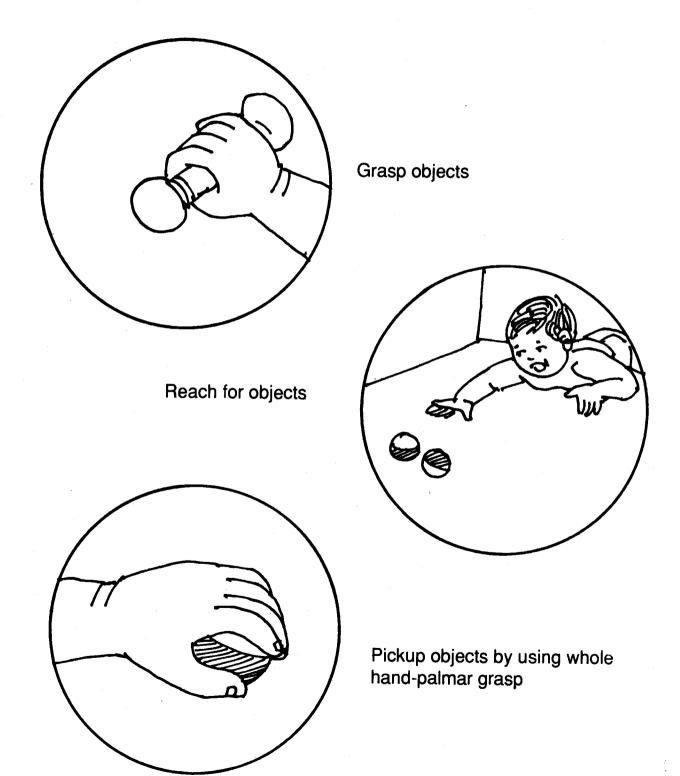
Proper coordination of limbs are essential for prevocational training and job placement. In case of children with mental handicap, fine motor development may be delayed or abnormal. If the delay is noticed earlier, professional guidance would help in improving the child in different types of fine motor activities. This package explains activities for children to enhance their fine motor coordination. It helps one to be independent in daily living activities.

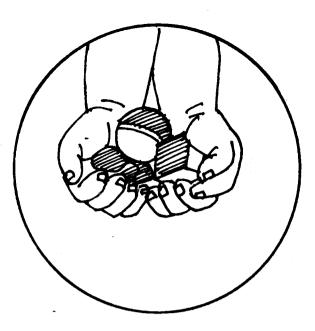
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Personal, social and vocational areas.

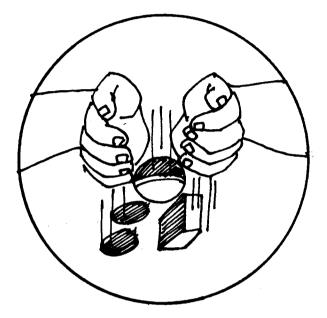
FINE MOTOR ACTIVITIES

Development of small muscles in a human body starts very early in life. Gradually the infant begins to :



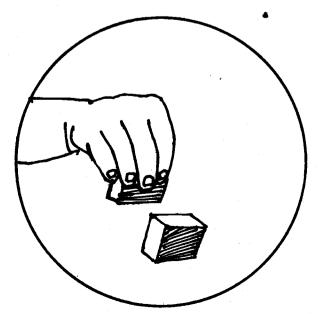


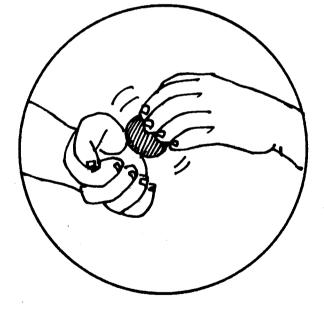
Grasp objects with both hands



Release objects

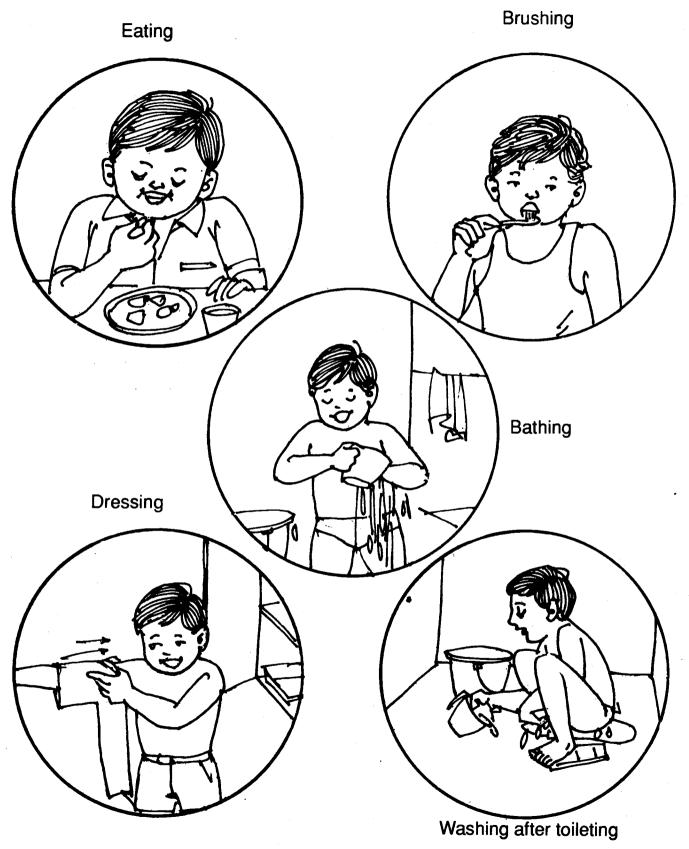
Transfer objects from one hand to another





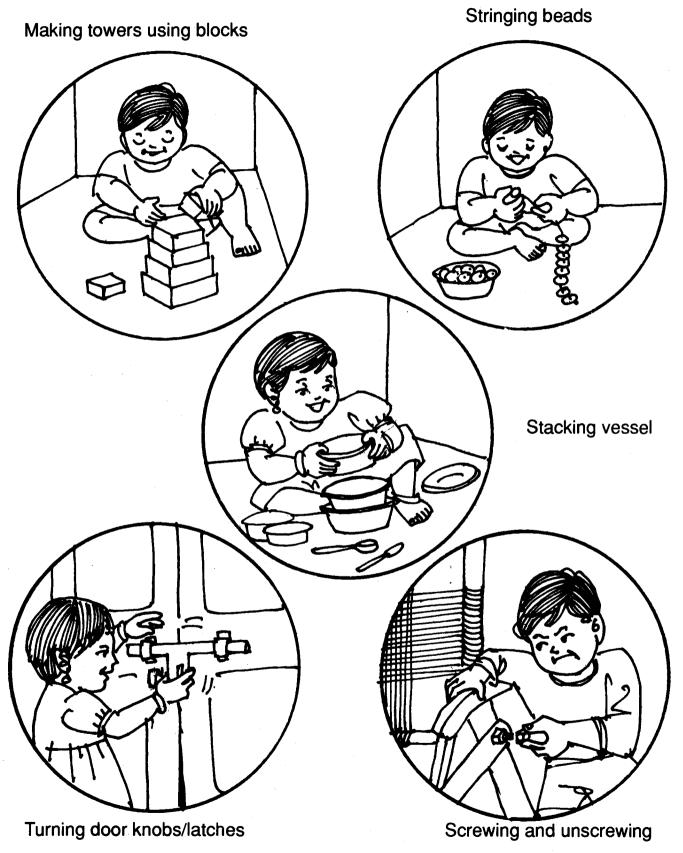
Pick up objects using thumb and finger tips.

As the child achieves palmar and finger grasps, holding and transferring objects, he uses these skills in daily activities such as,



4

In addition to self care skills, he engages in play activities and other house hold chores such as :



As he grows older, fine motor skills are used for more complex activities



Using tools-hammer, pliers etc.

Reasons for delayed fine motor development



Lack of nutrition

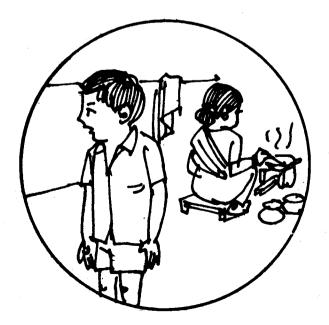
Lack of proper food during pregnancy affects the growth of the baby. This is one of the reasons for low birth weight. The child may not be active and fine motor development also may be delayed.

Pre mature birth

The children who are born before completing the full term of pregnancy also may have a chance of delayed fine motor development.

Lack of stimulation

If the child is left without proper care and motivation for movements, the fine motor development may be affected.



Birth injury

Birth injury due to instrumental delivery and such other reasons can affect the coordination of limbs. It may result in stiffness of joints and may restrict the free movement of the limbs.



Mental Retardation

Delayed fine motor development is often seen in the children with mental retardation.

Detect the delay as early as possible.



Fine Motor Developmental Checklist

In order to start training, the trainer has to find out what the child can do. If the child is below 5 years, this fine motor developmental checklist will help the trainer to find out the delay.

S.No.	Skills	Approximate age for skill acquisition	
1.	Maintains grasp on object	2 - 4 months	
2.	Brings hands together	2 1/2 - 4 months	
3.	Reaches for suspended swinging objects	3 - 5 months	
4.	Reaches for objects	4 - 5 months	
5.	Reaches for and picks up, using		
	whole hand grasp - (Palmar grasp)	5 - 6 months	
6 .	Grasps objects with both hands	5 - 7 months	
7.	Intentionally releases object from grasp	5 - 8 months	
8 .	Transfers objects from one hand to the other	5 - 8 months	
9.	Grasps two objects one in each hand	7 - 10 months	
10.	Reaches for and picks up object.		
	using thumb/finger tips grasp	71/2 - 12 months	
11.	Picks up objects using thumb and index finger		
	(Pincer grasp)	7 - 12 months	
12.	Puts objects in small mouthed container	10 - 14 monbths	
13.	Moves objects from one container to another	16 - 18 months	
14.	Stacks vessels	15 21 months	
15.	Turns knob	1 1/2 - 2 years	
16.	Turns pages of a book one at a time	2 - 21/2 years	
17.	Strings beads	2 - 31/2 years	
18.	Unscrews and screws a jar lid	21/2 - 31/2	
1 9 .	Pastes paper	2 1/2 - 3 1/2 years	
20,	Uses tongs to pick up objects	2 1/2 - 3 1/2 years	
21	Cuts with scissors	2 1/2 - 3 1/2 years	
22.	Laces on shoes	3 - 4 years	

LIST OF ACTIVITIES

- 1. Reaches for objects
- 2. Picks up using whole hand (Palmar grasp)
- 3. grasps with both hands
- 4. Releases objects
- 5. Transfers from one hand to another
- 6. Grasps two objects one in each hand
- 7. Picks up using fingers
- 8. Stacks objects
- 9. Turns door knob
- 10. Screws and unscrews
- 11. Strings
- 12. Pastes paper
- 13. Uses tools
- 14. Inserts objects
- 15. Assembles objects
- 16. Separates rolls of materials
- 17. Wraps objects
- 18. Cuts with scissors
- 19. Draws and paints
- 20. Sews



Fine motor skill training is always activity based. Select activities of daily living depending on the age and ability level of the child.





Fine motor development starts right from intancy onwards. Stimulate the infant early in life, for active movements of limbs, to reach and to grasp objects.

To stimulate the child let him have chances to see how other children are using hands to grasp and play with toys.



As he grows, allow him to use his hands to eat, to brush, to wash, to play and to help mother in daily activities.





If he/she is given more chances of recreational activities such as playing with toys, drawing, and painting, he may be easily motivated.

Always reward the child for his attempt and success.

Gradually introduce prevocational and domestic skills. The child observe activities such as gardening, packing, assembling, carpentary, spray painting, washing dishes and so on.





Remember that repeated opportunities to perform the activities will give experience. Appropriate rewards will strengthen the learning.

1. Reaching for objects

During initial stages of training, use objects of the child's interest. Motivate the child by showing objects, slightly at a distance.





As he moves his hands towards the object, bring it closer to him and appreciate. As he gains competence, increase the distance gradually. Change objects if needed, to sustain his interest.

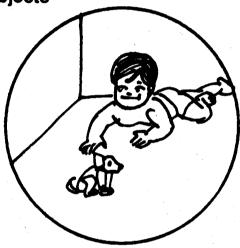
Allow him to reach for a suspended swinging object. Hold his hands and move towards an object suspended within the field of vision. Gradually reduce the physical help and motivate him to reach for the suspended object As the child learns to creep/ crawl, encourage him to move towards the objects and stretch hands towards it.

Use situations in daily life to reach for objects

Let him reach for eatables



When there are chances to receive objects, let the child receive them



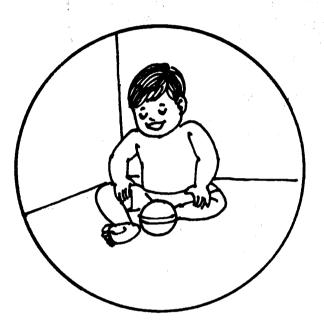
Let him reach for toys he wants to play with



Let the child respond by reaching for the familiar people who call.

2. Picking up objects using whole hands

As the child learns to grasp and to reach for objects, give opportunities to pick up using whole hand. Usually at six months of age, the child starts to use the whole hand to pick up objects.



Hold his hand and help him to pick up the objects using both hands





Keep an object - small ball or such small things



Gradually reduce the physical help. Motivate him by pushing his hand towards the objects to pick up. Praise him. Use attractive objects while training.

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Provide opportunities to pickup objects using whole hand in daily living situations

Play situation

Let the child pick up a toy and play with it



Give chances to the child in the kitchen in activities like picking up vegetables

During bathing time give opportunities to the child to use his hand-picking up mug and soap, applying soap, squeezing water from small clothes and so on.



3. Grasping with both hands

As the child gains the ability to grasp, reach towards objects and use whole hand to pick up objects, train him to use both hands for grasping.

1. If sitting position is more comfortable, use that posture for training.



3. While training, use the objects the child is interested in. Select one of them. Keep it in front of the child and child's hands around the object.



2. Select toys which need both hands to grasp; balls, squeezy toys, moving toys, tins, and so on.



4. Help the child to grasp an object and lift with both hands. Appreciate for doing so. Gradually reduce the physical help.



Provide toys that require holding with both hands. Provide variety of toys to prevent boredom





Use activities of daily living.

While drinking : Make the child hold a plastic or steel tumbler with both hands if needed. Initially, have very little liquid in the tumbler so that it does not spill.



While learning to stand : Make the child hold places or objects like tables, doors and chairs with both hands.

4. Releasing objects

1. Some children have difficulty to release objects after grasping them. In such cases seek medical help.

2. By the age of 5 to 8 months, children start releasing objects intentionally. If after grasping an object the child does not release by himself, hold his wrist, push on the back of the hand and tell him to release it.





3. Hold an object, get the attention of the child, and release it. After showing how you release an object, let the child also repeat it.

While teaching releasing objects, show how fragile objects like glass and breakable toys are kept on the surface before releasing hands. Children who have problem in releasing objects often respond well when asked to squeeze water from sponge. Preferrably before bath seat the child comfortably. Keep water in a tub and 2 pieces of sponge in it. Physically assist the child to pick the sponge out of water and squeeze. Then release the sponge into water. Let the child do it with both hands alternating. Adding colour to water or change of temperature of water within limits, are variations to sustain interest. Many parents have reported success with this procedure.



If the child holds a toy because he likes it and does not want to release it, do not force him.

Sensitize him of things that would get damaged if released from a height.

5. Transferring from one hand to another

1. To teach transferring an object from one hand to another, the child should have whole hand grasp, ability to move hands towards opposite direction and to release the object. Children automatically learn to do this. If they fail, follow these steps.

2. If he is able to pick up an object with one hand, tell him to do so and physically guide him to move the hand with the object towards the other hand.



3. Guide him to transfer the object to the other hand. Gradually reduce the physical assistance and give him verbal clues. Praise him for his attempts. Use the objects of his interest during the initial stages of training.



4. Train him in a play situation. Let the child sit in a circle with other children. Select games like passing the parcel (with modification), to transfer the object from one hand to another and to pass to the next child's hand. Praise him for his attempts and success.



5. Train the child in daily living situation. When the child has an object in right hand and if he has to receive something from another person, tell him to transfer the object in right hand to the left hand and to receive the new object with the right hand.



6. Holding two objects one in each hand

1. As the child develops palmar grasp, start training the child to hold objects one in each hand.

2. Give opportunity to pick up an object up with right hand. If necessary physically help him to pick up or place an object in the right hand. Tell him to hold it.

3. Holding one object in the right hand, tell the child to pick another object with left hand or place an object in the left hand. Tell the child to hold it.

4. As he holds the object keeping one object in each hand for about a minute, tell the child to release them in your hands. Praise the child for the success. Make it like a game to sustain the interest.



5. Arrange games to pick up small objects with right hand and transfer to the other hand, or to a container in the other hand. Give the child opportunities to transfer objects from left hand to right hand also.

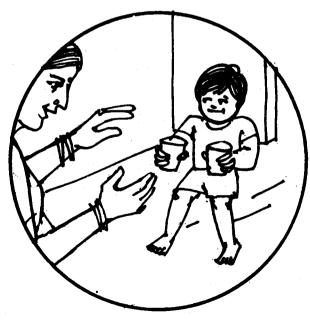


Select activities :

- Picking up two objects one in each hand and walking or running towards a point.
- Bringing two cups or fruits one in each hand.



6. Depending on the age of the child, list out more activities. For example, when the child holds a tumbler in the right hand, tell him to transfer to the left and pick up a biscuit and eat with the right hand.



7. Picking up using fingers

1. To pick up objects using thumb and fingers, more coordinated movements of the fingers are needed. In case the child has physical defect or deformity consult a doctor. Arrange for physiotherapy as advised.

2. Hold the child's hand, bring finger tips together, move the hand towards the objects and assist the child to pick up with finger tips. Gradually reduce the assistance. Use things that are of child's interest. Remember no activity can be carried out without child's cooperation.



Try and see how it helps :

- 1. Putting things in a container and taking them out
- 2. Taking gemclips from magnet pin containers
- 3. Picking up clips from clothes line
- 4. Cleaning grocery items like rice and dal by picking stones from them.
- 5. Games in a group to pick up small objects in a given time.

8. Stacking objects

1. As the child learns to pick up objects, to maintain grasp and to release at his will, train him to use this skill in his daily activities. There are frequent needs to stack objects in different situations in day to day living.

2. During initial stage of training if possible, play materials can be given for the child to stack. For example, building blocks, graduated cylinders and so on. Later tins, cans, books and such other items can be used.



Activities

- 1. Piling magazines / newspapers
- 2. Stacking own clothes in almirah
- 3. Closing the tiffin carrier after keeping food/objects
- 4. Helping in the kitchen to stack tins, utensils and plates.

9. Turning door knobs/latches/bolts

1. As the child grows, proper finger coordination and hand functioning are important to perform many activities of daily living.

2. Different kinds of knobs/latches/ bolts are used in the doors of different buildings. Start training to open and close the door latches in the house.



- 3. As the child learns to manipulate the latches of the doors in his house, introduce different types of latches and knobs which he comes across at different places.
- 4. Use the actual situations for training like opening and closing the doors.
- 5. When the child is taken out to relatives' and friends' houses, make him open and close doors when needed.
- 6. It is important to train him to turn the door knobs or fix latches of toilets so that the child can maintain privacy while using them.

Make sure that the child does not lock himself inside a room. Readiness of the child to learn is very important before starting the training.

10. Screwing and unscrewing

- 1. Motivate the child before the training starts. Take a transparent plastic container with a lid that is screwed on top, keep an object of his interest (a toy/sweet) inside and close the container.
- 2. Show the child the container. Give it in his left hand and place your hand on the top of his right hand and help him to turn the lid to open and take out the object inside. Similarly teach closing/ screwing.



Variety of activities can be provided for this skill by using bottles with various sizes of screw lids, nuts and bolts in plastic, fountain pens and so on.

Opportunities :

- 1. While brushing teeth, to open and close tooth paste tube
- 2. Before writing, opening a pencil which has a lid to open to take out pencil.
- 3. While cooking, opening containers for you in the kitchen. Make sure you do not give containers with spices.
- 4. While grooming, opening powder tins, nail polish bottles, oil bottles and so on.

11. Stringing

Stringing is an activity which needs eye hand coordination. Ability to thread/string leading to making garlands, and many other activities are enjoyable and useful.

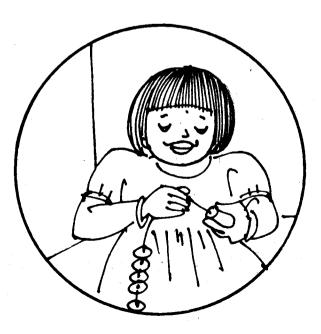
1. Initially, select beads/objects which have big holes. Let the child see when you insert the string through hole of the bead/ object.



3. Tell him to look at the hole, and move the string towards the hole, insert and pull the end from the other side of the hole.



2. Help him to hold the string edge in the right hand between thumb and index finger and the bead/ object with hole in the left hand.



To make it easy

The string should be preferrably shoe lace or similar one with stiff edge. The edge can be made stiff by applying melted wax. Secure the other end of the string with a bead so that strung beads do not tall off.

4. Give the child different objects. For example, make paper rings pasted at both ends or pieces of sticks which have holes.





As the child gains competence, provide needle and thread - initially long blunt needles and gradually the sewing needles.

Give opportunities for

- Inserting shoe lace
- Making flower garlands
- Making paper garlands
- Making bead garland
- Threading for sewing
- Sewing patterns on boards

12. Pasting

In day-to-day life, in many circumstances, pasting things together becomes essential. It helps in recreational and vocational activities.

1. For pasting ready made gum is available in bottles. Home made pastes made of rice and maida are also used. In certain places the dried gum is produced by making cuts on the trunk or branch of the tree, which is later dissolved in water and used for pasting.





2. Depending on the type of gum used, train systematically. If there is no brush available to apply gum, prepare one by sticking a piece of cotton on a thin stick. 3. Initially make marks or draw line with a pencil in places where gum should be applied. Make similar marks on the area on which the item with paste is to be stuck. Guide the child to match the marks and stick. Initially give simple items and gradually increase the complexity.

Activities

51.0

- Pasting cut shapes / pictures on drawn lines.
- Pasting and torn paper, leaf, flowers, saw dust, sand on a given outline.
- Pasting sides of envelopes
- Sticking together a number of paper bits to form a design/shape
- Pasting on gift wrapping
- Pasting pictures/stamps/leaves to make an album.

13. Using tools

1. As the child improves in hand coordination, introduce skills to use tools such as hammer, nail clipper, knife, scissors, blade and pencil sharpener.

Caution

If the child gets epileptic fits do not allow him to use the knife and such sharp tools as an attack of fits while using the tool can hurt the child. Using of the tools should always be under supervision.

2. Demonstrate how the hammer is used. Show to the child how people use it in different activities like nailing and stone cutting. Train the child to use a hammer. Peg boards and hammers which are available commercially are very helpful in teaching how to use a hammer. To start with, wooden hammer and wooden nails can be used.



Note : Only when a child is old enough and in a position to understand instruction and has gained good coordination, teach these skills.

- 3. Demonstrate and explain the use of the nail clipper. Demonstrate how to open and close it. Guide the child in using the nail clipper.
- 4. Let the child observe when the knife is used for different purposes - such as cutting vegetables, sticks, etc. If somebody cuts the fingers while using it make use of the opportunity to explain to the child that it is dangerous if it is not handled properly. While teaching cutting, start with easy vegetables such as ladies finger and gradually move to difficult ones.



6. Children show interest in sharpening their pencils using a sharpner. Show how to insert, turn and take out the chips. Be cautious about continuous sharpening and breaking the lead.



5. As he learns give him chances to use knife in daily life situations under supervision - cutting vegetables spreading butter and jam on bread and so on.



14. Inserting objects

1. Start to insert shirt during dressing. Show him how the shirt /top is inserted. Tell him to insert the shirt while dressing and also whenever it tends to come out.

2. Insert the belt through the loops of the pants and show how it can be inserted through all the loops. Help the child to find the loops which are left out.

List out some other activities which involve inserting, like inserting objects in paper bags and envelopes, inserting letters in a post box and inserting coins in public telephones / temple hundies.



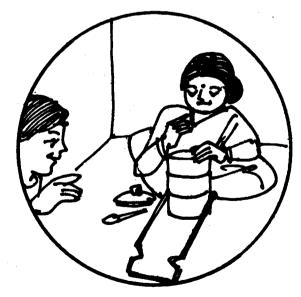
15 Assembling objects

Depending on the age and ability level of the child, select objects for assembling - toys, materials in daily use, materials from workshop and so on.

1. Initially give the child toys which can be made into 2 to 5 parts and assembled again. For example, a doll - take out the parts, demonstrate and tell him, how to join hands and legs of the doll, and guide him to assemble again. Make sure that for this purpose you give the child only those toys which can be dismantled.



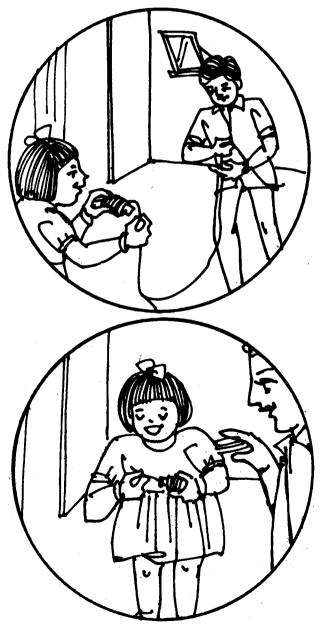
2. Select objects available at home which can be used for this activity - tiffin boxes and tiffin carriers.



16. Separating continuous rolls of materials

- 1. Let the child observe separating of continuous rolls of materials. for example :
 - taking out thread from a roll
 - taking out clothes from a roll at textile shops
 - taking cellotape from a roll
 - taking out ribbons from a roll

2. When you have to take out thread from a roll, give the end of the thread to the child. Tell him to pull it when you hold it. Instruct him to stop it when the sufficient length of thread is taken out.



3. Train him to take out thread/ rope keeping the roll in one hand and the tip of the thread/ rope in the other hand.



4. Guide him to move his hands and stop after sufficient length of material is taken out

- 5. Give opportunities to take out materials from rolls.
- 6. Depending on the age and ability level of the child, expose him to vocational situations. For example, factories where people are engaged in separating the materials from rolls.

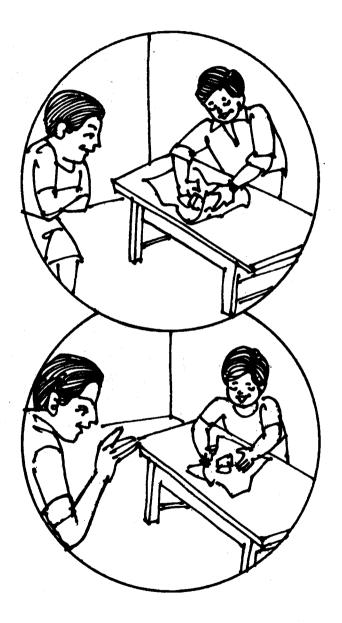
Play activities
1. Kite flying
2. Keep a roll of rope in your hand and let the child hold the tip and walk backward.

17. Wrapping objects

Showing gift packets and other objects wrapped with paper, explain the need to wrap objects and motivate him to learn how to wrap objects and gifts. This is an activity which is not generally frequently carried out at home by everyone. However if the child has a taste for it, he can be trained.

1. Let the child watch when you wrap objects.

2. Give him the paper to wrap. Tell him to place the paper in front of him. If it is a paper with designs, demonstrate how to place the paper with the designs facing the table.



3. Start with old papers for wrapping objects that have definite shape, like a small box, book and so on. when he has learnt it, provide good wrapping paper. Objects with irregular shapes can be provided after the child is perfect in wrapping the ones with regular shapes.

- 4. Sides to be folded can be numbered in sequence, so that he gets clue for folding
- 5. Give him chances to wrap objects whenever it is needed. Teach different ways of wrapping objects. show how people wrap objects in a shop. In factories and other vocational set ups, show him how people wrap or make parcels to send.

Training in an activity which is started as fun, can lead to fruitful vocational activity !

18. Cutting with scissors

1. For training purpose use blunt edged small size scissors. Let him hold the scissors properly and move the blades.

2. Use waste paper for training purpose. Hold his hand and help him to make movements to cut the paper. Start with cutting straight lines. To sustain interest, draw straight lines of various colours. Let him cut on the lines.

3. As he learns to cut independently, give simple designs to cut and paste. See that he does not cut important documents, clothes, and other materials.

Give chances for

- cutting paper/cloth
- cutting rope/thread/tape
- cutting materials into proper sizes



19. Drawing and Painting

Some children are interested in drawing and painting. Depending on the ability and interest, introduce drawing and painting as a recreational and leisure time activity.

1. finger Start with Show him painting. how to dip finger in the paint and make designs. Old newspapers can be used for training purposes.



Note :

Prepare paint for finger painting by mixing the paint powder and water in slightly thick consistency. The paint /powder should not be toxic and should not stain clothes.



2. As a next step, give him crayons/ sketch pens which he can use for drawing and painting. Designs can be made and given to him to fill in with crayons/sketch pens. When the child holds the crayon, pen or brush make sure that he holds it appropriately. Correct him if he holds inappropriately. Do not be upset if he does not colour within the line initially. As he gains control he would do it correctly. While giving pictures for colouring, encourage him to use the appropriate colours such as red for tomato, green for leaf and so on so that he develops colour concept also.

3. Demonstrate using a brush for drawing and painting. Instruct and guide to mix water with colours, dip the brush and paint.



20. Sewing

Proper eye-hand coordination is needed for threading the needle for sewing. This skill is useful to sew buttons, to mend torn clothes and to make simple clothing.

1. The methods to teach threading the needle is explained earlier. As he learns to thread the needle, introduce sewing. Explain the need for sewing by showing old torn clothes. Demonstrate sewing of buttons in case they come off.



- 2. Provide clothes that are loosely woven or matty cloth initially. Emphasise that the side through which needle is pulled out is the side through which it should again be inserted.
- 3. Give thread initially to prevent knotting of the thread. Secure the ends of the thread.
- 4. Stitching big shirt buttons can be introduced in early stages.
- 5. Gradually increase the complexity. keep in mind the child's interest.



Fine Motor activities are very many. use your imagination to train the child . Remember to highlight the child's achievements !