DOCUMENT RESUME

ED 037 841 EC 004 950

AUTHOR	Patterson, Natalie E., Comp.
TITLE	Multi-Sensory Approach to Reading Disabilities.
INSTITUTION	Fayette County Public Schools, Lexington, Ky.
PUB DATE	68
NOTE	25p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$1.35
DESCRIPTORS	Dyslexia, Emotional Problems, *Exceptional Child Research, *Identification, Instructional Materials, *Intervention, Language Arts, *Learning Disabilities, Minimally Brain Injured, Motor Development, Referral, Remedial Reading, *Remedial Reading Programs, Resource Teachers, Teaching Methods

ABSTRACT

Educational diagnostic methods were used to screen children evidencing minimal brain damage, dyslexia, or emotional problems. Of 750 children, 15% had such difficulties; they received a highly structured language arts program in homogeneous transition groups while remaining in their usual homeroom. In addition, they participated in motor training and a rhythm and patterning program. Academic gains resulted in various areas; reading ages increased an average of 1.7. Appendixes, comprising about two-thirds of the document, provide the referral form and an explanation of it along with descriptions of methods and materials used in the three programs. (JD)

MULTI-SENSORY APPROACH

TO

READING DISABILITIES

Psychoneurological learning disabilities are described by Johnson and Myklebust in their recent book, Learning Disabilities, as "deficiencies in learning associated with the fact of adequate motor development, average or better intelligence, adequate hearing and vision, and adequate basic emotional make up. This category of learning disabilities includes children with minimal cerebral dysfunction syndrome, children with brain damage, the perceptually handicapped and the dyslexics."

Compiled

by

Natalie E. Patterson

Fayette County Public Schools
Division of Instructional Services
Department of Special Education
400 Lafayette Parkway
Lexington, Kentucky
40503

1968

11-7-68

AN EFFORT TO MEET INDIVIDUAL NEEDS OF CHILDREN WITH READING AND MOTOR PROBLEMS

The philosophy of Fayette County Schools encompasses the tenent that we must meet the individual needs of each child. Because of this conviction, we explored with an informal evaluation those children whose intellectual capacities fell within the normal range, but whose reading age was at least 18 months to two years below their instructional level as indicated by chronological age. Among the older children the discrepancy became as great as five years.

The techniques we employed in screening the student population were simple educational diagnostic methods, not medical evaluations. However, the rate, over a two year period, of medical substantiation was extremely high. Our procedure could be employed by any school willing to dedicate an adequate amount of time to in-service training.

Teachers were provided forms on which specific information was requested. (See Insert I attached)

The pertinence of the information collected on the "Teacher Referral Form" is discussed in Insert II attached.

National statistics conservatively based indicated that we would find 15% of our student population afflicted with perceptual problems which would retard their academic performance while their I.Q.'s remained within normal limits. We found this to be accurate as it related to a student population of 750 children. In addition we discovered that these children had perceptual problems related to several etiological factors, and that each factor was represented in various degrees of involvement, ranking from mild, to moderate, to severe. Clinical evaluations available substantiated our educational diagnosis that the majority of these children as a group were representatives of three categories: minimal brain

injury, dyslexia (a history of genetic dominate gene transmitted symbol confusion) and emotional problems. Other etiological factors were also represented.

Regardless of the etiology involved, we knew that the same type of remedial instruction would be successful with all three groups. (Admittedly, the emotionally disturbed children would profit less than the other two groupings.)

We found that all of these children were limited in academic performance by a similar set of characteristics, regardless of the causative factor. Those most evident behavioral characteristics are:

1. Disturbance in visual-motor gestalt functions: rotation of figure in space (letter reversals)
2. Dysgraphia (partial disability to write or direct hand)
3. Dysrhythmia (inability to repeat a rhythmic pattern based on auditory stimuli)
4. Failures in tonal reproduction (inability to repeat specified intervals in a musical scale of 7 notes)
5. Non-specific motor dysfunction: gross motor deficiencies (inability to hop with both feet simultaneously; one foot independently; or skip, general awkwardness)
6. Hyperactivity (or occasional hypo-activity)
7. Difficulties in left-right progression
8. Short attention span
9. Field dependent perception: figure-ground disturbance
10. Distractibility
11. Speech clutter (not an actual articulatory disorder)
12. Weakness in abstracting and generalizing and categorizing
13. Obvious academic problems particularly evident in reading and spelling. (Spelling difficulties are more obviously apparent in composition than on spelling tests.)

Regardless of etiology, the common needs of these children is so evident that it cannot be denied. The fact that these children, comprising 15% of the student population in any school, cannot be successful in a normal learning situation no matter how hard they try, should be sufficient to cause every school to examine their curriculum and methodology. The question becomes obvious: Are we meeting the needs of each individual child? The answer is equally apparent: We are, in varying degrees of adequacy, meeting the needs of 85% of our youngsters, and missing the mark completely with 15% of them.

The next question is equally as obvious as the first: If we are not meeting the needs of these children, how must we change to allow for their needs? The major immediate concerns include such considerations as (1) must we establish special schools or classes for these children who are normal in so many respects, and sub-normal in a few other respects? (2) Must these so "like normal" youngsters be separated or segregated away from their peers because of their special needs? (3) In what manner can we help them toward a normal performance most efficiently and most expediantly? (4) Is the help that they need, help that must be supplied by special teachers in costly low teacher-pupil ratio units? The answer to questions 1, 2 and 4 is "no." The answer to question number 3 is the simple answer to a complex problem.

The similarity of need regardless of etiology is what prompted our investigation of curriculum adaptation and the innovation of a new type of programing. These children are not so abnormal that they need be separated from their peer group. By contrast, their major emotional need is to succeed within the sight of their contemporaries, rather than to be excluded from the group whose acceptance they need to receive. Their abilities are more within than without the "normal" capacities. With this understanding in mind we set about finding a way in which we could adapt the regular curriculum within the school to meet the needs of these youngsters.

Knowledge of their special needs indicated that we must develop a three phase program into which these children must be scheduled in addition to their regular classroom activities. The first phase was a high structured language arts program which was phonetically and linguistically based. This program must provide new experiences, rather than more of the same auditory and visual experiences from which these youngsters could not learn previously. Within the framework of the program must be experiences which allowed for the utilization of senses other than visual and auditory senses. We knew that these children have built in "scramblers" which distort directionality of figure and symbols spatially. We were aware that the "scrambler" was equally efficient in distorting auditory stimuli as well as visual stimuli. Our need was to provide a program which involved the other sensory perceptors as reinforcement for the inconsistent visual and auditory imput.

Involvement of the other senses can be achieved by using tactile and kinesthetic experiences in conjunction with the language arts instruction. These methods when employed in a regular classroom setting would become burdensome because of the time factor. Their use would slow the pace of instruction to the point that it would adversely affect the teaching-learning situation for "normal" students. It became obvious that even though these children needed to be grouped heterogeneously in homerooms for social purposes that we must find a more effective way to group them for language arts, math, science and social studies.

The method of grouping which evolved from this need was fairly simple to implement. We formed "transition" groups at grade levels 2, 3 and 5. The children assigned to these groups were assigned on the basis of chronological age. Within each group of 16, there was a wide range of reading ages. The children remained in heterogeneous homerooms until the end of the administrative period. At that time children throughout the school regrouped for language arts block. Our reading problem children went to the teacher assigned to their "transition" groups for a

two hour block of language arts instruction. This caused no stigma to be attached as all students were moving to an instructional area at the same time. At the end of the language arts period general movement throughout the building was again normal, and without undue attention these youngsters moved again as a group to the teacher assigned to them for the arithmetic block. Here again the teacher had a small group with common needs and could employ tactation, kinesthesis and more concrete methods in arithmetic presentations. When these transition groups moved on to science and social studies areas the teachers were ready for them. Meeting their needs in these areas of instruction indicated stressing the use of lecture, audio-visual aids, charts and experiments rather than reliance upon the textbook which these youngsters could not read. In a conventionally structured school, these students could be assigned to one teacher with whom they could stay all day for instruction.

The results were rewarding. This method of grouping had accomplished two things: (1) It had removed the behavior problems from the regular groupings making the teacher-learning situations more satisfactory and (2) It had placed the problem students in settings in which they could succeed. For many of these youngsters it was the first successful academic experience of their school lives. As successful experiences continued for these children, the behavioral problems deminished and the contingent emotional overlay obvious in so many disappeared. They were becoming happy students, developing healthy self-images. We found the time honored axiom "nothing succeeds like success" to be more than true with these youngsters. See Insert III for methods and materials used in Language Arts instruction.

The transition groupings had allowed for meeting the academic needs of these youngsters, or the first of the three phases of programing had been successfully implemented. Their remaining needs were met by the development of phases two and

three. The other symptoms of their common disabilities, general motor dysfunction, lack of dominance, lack of left-right discrimination, and dysgraphia were dealt with in phase two. With the aid of parents from the community, the physical education instructor conducted three units of gross motor training each afternoon. These programs were conducted for 25 minute time periods. During their participation in the motor program the children were supervised on a 2 to 1 ratio by trained parent helpers. The physical education instructor was responsible for the use of a trampoline and general supervision of the program. The activities listed and described in Insert IV were those undertaken daily in the motor program. They are but a few of the many variations which can be devised. However, they will provide a basis on which to begin such a program. (See Insert IV attached)

Phase three was designed with the cooperation of the music teacher who conducted three units of 15 minute duration each afternoon. In this program, designated "Rhythms and Patterning" the remaining symptoms of the general disabilities were dealt with. Here the problems of rhythmic patterning, sequenceing temporal areas, tonal reproduction and left-right discrimination were remediated. (See Insert V)

The totality of the program, rather than any one element of it produced more than hoped for results in the first 18 month period of operation. Increases in reading ages ranged from .8 to 3.4, and averaged 1.7. The fact that many of these children had been in school for a number of years and were still non readers at the beginning of the program encouraged us to believe that it was the change in curriculum rather than maturation that was the cause of their dramatic academic improvement. This improvement was consistent in other areas of instruction also. Science and social studies based as it was, rather than on the use of text reading assignments showed an increase in knowledge gained equal to that expected of students in a traditional setting. Arithmetic gains were far above the gains

previously recorded for these children. These generalities are based on results of pre- and post-standardized achievement tests.

The obvious academic success made our efforts justifiable. However, other gains in the affective areas were as important and rewarding. The children in the three transitional groups had comprised over the years the back bone of our discipline problems. When they could succeed and grow in the knowledge that they were not dumb they no longer found their way to the principal's office daily or sat in the hall through half of each day. Their peer group relationship improved in direct ratio to the improvement of their self-image. The attraction of being the only students in the school to be taught trampoline techniques plus the additional experiences of "Rhythms and Patterning" and the "Motor Program" had the effect of identifying these groups as the "elite". Acceptance was this complete due to two factors: (1) thorough orientation of students and parents before the program was initiated, and (2) a conscientious effort on the part of the staff to avoid the attachment of labels to the children.

The importance of this experiment with curriculum lies in the fact that a successful attempt was made to alter the curriculum instead of the child and that this was accomplished without the employment of additional staff or area specialists. It was accomplished without major disruption of the existing school structure. In-service training within the school staff was necessary to develop acceptance, understanding, enthusiasm, and support on the part of the teaching staff. Without this such an innovative program could not thrive. The new-found ability to reach the previously unreachable child was ample reward for the effort of each staff member. Needs identical to those found in our student population exist in every school district. What was done here can be done anywhere where the desire is great enough.

INSERT I

MOTOR - LANGUAGE DEVELOPMENT REFERRAL FORM

1. NAME
   ADDRESS:
   TELEPHONE:

2. TEACHER:
   BIRTHDATE:
   GRADE LEVEL:
   REFERRAL DATE:

3. GRADE LEVEL OF COMPETENCY IN:
   ARITHMETIC: WRITING:
   READING: SPELLING:

4. REASON FOR REFERRAL (be specific):

5. OBSERVATIONS OF BEHAVIORAL CHARACTERISTICS:
   ( ) confusion in left to right progression
   ( ) lack of right or left dominance
   ( ) field dependent perception
   ( ) disturbance in visual-motor gestalt functions
   ( ) non-specific motor dysfunction
   ( ) dysrhythmic
   ( ) dysgraphia
   ( ) spelling difficulties
   ( ) speech disorder
   ( ) inattentiveness
   ( ) hyperactive
   ( ) allergies

7. TEST INFORMATION

Metropolitan Readiness Test (sub-test scores)
Word Meaning
Listening
Alphabet
Numbers
Copying

6. Intelligence Tests

Test Verbal Performance I.Q.

Stanford Achievement Test (sub-test scores)
Par. Mean.
Word Mean.
Spelling
Language
Arith. Reasoning
Arith. Concepts
Soc. Studies
Science
Study Skills

COMMENTS:

INSERT II

RELATIVE IMPORTANCE OF INFORMATION SECURED ON REFERRAL FORM

Section 2	Observation of discrepancies between C.A. and grade level placement will indicate problems. Child may be 7.5 or 8.2 with average or above I.Q. and be inadequately functioning at grade level 1.
Section 3	In section #3, the child we are attempting to identify will show marked difficulty in three of the four specific areas listed: reading, writing and spelling. Examples of handwriting will generally display reversals, poor spacing of words, omission of letters, over-all messness, incorrectly formed symbols. Spelling will often be totally unrelated to sound; short words such as "may" or "food" may have as many as 8 letters; initial, medial or final sounds may be completely eliminated. Oral reading will display reversals "was" becomes "saw", "top" becomes "pat", "left" becomes "felt". Whole words may be omitted or placed out of sequence; many substitutions may be made; and frequent visual loss of place occurs. Little or no ability to attack words phonetically is obvious even though the child may have had adequate training in these language skills. Once the word has been broken down and sounded out, these children are unable to reconstruct the letters in the proper sequence.
Section 4	Section four is valuable inasmuch as it allows the teacher opportunity to express exactly what in the childs performance prohibits him from succeeding in a regular language arts setting.
Section 5	In-service training with the entire teaching staff is necessary if section 5 is to be of real value. Each classroom teacher must have a general ability to recognize the behavioral characteristics listed in this section. This is not difficult once a basic understanding of the terms listed in section 5 has been mastered. Discussion of terms on page 2 should provide adequate information to allow a teacher to make simple judgments.
Section 6	Intelligence tests usually available in progressive school systems can also be an asset in helping determine perceptual difficulties. Particular attention should be given to the difference between verbal and performance scores. A discrepancy of more than 10 points between the two scores is frequently an indication of perceptual disturbances.

Section 7	Wide scatter between sub-test scores on standardized readiness and achievement tests are indicators of possible perceptual disabilities. The sub-tests with particular meaning are "Copying" and "Alphabet" sections of the Metropolitan Readiness Test. A very low score or score of "0" contrasted against high scores in the remaining areas is usually an indication of disturbance in perceptual functioning.

INTERPRETATION OF INFORMATION

When evaluating the information gathered on the referral form, the examiner must look for a total pattern of the discrepancies discussed in sections 1-7. The child under question should show weakness in all areas. Remembering that degrees of involvement vary from mild to severe. You must realize that the degree of break-down displayed will vary also. Some children will be in obvious trouble. Others may exhibit such mild indications that the examiner is confused as to the existance of any real problem. However, if reading is a severe problem and mild indications are present in all areas, and no further reason is known as cause of the reading problem, it is fair to assume a mild perceptual problem exists.

INSERT III

LANGUAGE ARTS DEVELOPMENT - METHODS AND MATERIALS

Many of the children with whom we are working are afflicted with symbol confusion. They are unable to maintain constant directionality of a symbol in space. Thus, "b" becomes "d", "p" becomes "q", "w" becomes "m", "was" becomes "saw", "on" becomes "no", and "left" becomes "felt". Since visual and auditory stimuli is frequently scrambled, causing an inconstant imput, the output is also inconstant and the child's performance poor or failing.

We know that visual stimuli can not be relied upon, therefore, we must substitute additional or other sensory experiences which the child will not scramble. The sense of touch, or tactation, will help establish the directionality of a symbol for these children. They will not scramble what they feel. Simple materials are necessary for these tactile experiences. They include sandpaper, clay pressed out in a shoe box lid, beaded commercial letters, velvet ribbon or yarn glued onto heavy cardboard in the form of letters and chalk and chalkboard space.

The first step in teaching recognition of symbols or in eliminating frequent reversals of letters is to place the desired symbol on the chalkboard in a form at least 18" high. Have the child trace over this with chalk approximately 50 times. When this is accomplished, he then must put the chalk down and trace with his finger tip until he has erased the symbol from the board. Each time that he makes the trace with chalk or finger tip he vocalizes the name of the symbol and the phonetic sound associated with the symbol. This simple activity has given the child the customary visual stimuli, plus the reinforcement provided by auditory, tactile (touch) and kinesthetic stimuli.

The kinesthetic reinforcement occurs when the large muscles involved in tracing the figure send messages through the central nervous system to the brain

regarding the form and directionality of the symbol. The child does not confuse or scramble messages kinesthetically received. Tracing symbols in the air also provides this experience.

The second step employs the clay trays, sandpaper, yarn or ribbon letters or commercially purchased beaded letters. After finishing at the chalkboard, the child may return to his desk, and using one of these items continue to trace the same symbol with his finger, and again vocalizing the name of the symbol and associated sound. Here the reinforcement of the kinesthetic (muscle messages) is decreased because of the smaller figure traced; however, the sense of tactation is greatly increased due to the texture of the material being traced.

It is necessary that only one or two letters be introduced at a time. When these are mastered, others may be added gradually. Review of those already mastered should be frequent. Once the child has learned to form the symbol and associate the correct name and sound to the symbol, he should be given opportunities to write single letters from dictation of the name or the sound with name of the letter indicated omitted.

Teaching devices such as Language Masters, record players and phonics records, tape recorders and teacher prepared tapes are excellent aides, particularly when earphones can be used. The use of earphones helps in screening out inconsequential background stimuli, helping the student to concentrate on the foreground sound. Inasmuch as auditory discrimination is frequently difficult for these children, opportunities for them to imitate a given sound, record it and play back both the given sound and their response for comparison are valuable. The experiences which are provided in Rhythms and Patterning also help remediate this weakness.

At this point it is vital that the reading program be based on a highly structured phonetic-linguistic approach. Several available series are

recommended:

1. McGraw-Hill - Sullivan Programmed Reading Series
2. APSL by Dr. Shedd
3. Lippincott Series

These children will profit from the employment of the same methods and materials in the teaching of blends, syllabication, and spelling. In addition, their performance will be improved if the structure of their program allows that the reading vocabulary words for the week can also be incorporated in their writing exercises and their spelling words.

INSERT IV

MOTOR PROGRAM

MARSDEN BALL

Ball suspended with string or twine about eye-level height.

PURPOSE: To develop eye-hand coordination
To develop occular mobility

METHODS:

1. Child is to use both eyes and both hands, placing the hands on the bat and hitting the ball between the hands.
2. The child is to cover one eye, hold the bat in one hand and hit the ball.
3. The child is to reverse the process, covering the other eye and repeat.
4. The child is to lie flat on back with eyes directly under the ball and then follow the swinging ball with the eyes only.

WALKING BOARD (See attached sheet for illustration)

PURPOSE: To develop balance
To develop directionality
To develop laterality

METHODS:

1. Child traverses the board in a forward position about four times. Place each foot squarely on board so that both toe and heel make contact at each step.
2. Then in a sidewards fashion four times, and last in a backward direction.

   (Nos. 1 and 2 should be done without looking at the feet.)

3. Walk board without stepping off then turn and walk back sidewise. (½ turn)
4. Walk board without stepping off then turn and return walk back forward.
5. Walk board without stepping off then turn and walk backwards. (1 full turn)
6. Child is to stand on the floor and progress down the length of the board by crossing his feet over the board, much in the manner of lacing a shoe.
7. Bounce in center of board without removing feet from board.

BALANCE BOARD & TWIST BOARD (See attached sheet for illustration)

PURPOSES: To develop flexible postural adjustments
To develop balance and directionality
To develop laterality
To pinpoint center of gravity of body
To create awareness of body image

METHODS:

1. Child is to stand on the balance board, using both hands, he is to bounce and catch the ball.
2. He then is to cover one eye and bounce and catch the ball with one hand. Also, he covers the other eye and repeats the process.
3. Perform calesthenics while balancing on board.
4. Touch various body parts upon command while balancing on board.
5. Play toss and catch ball with another child as both are balancing on board.

CHALK TRACES

Any chalk board with a lazy figure 8 outlined on it (Ex. ∞).
The figure should be approximately 24" wide and 10" high.

PURPOSES: To develop laterality
To develop ability to cross the body midline.
To observe relationship between different motor acts and products within the same figure

METHODS:

1. Child stands directly in front and at center of the figure (∞) as he traces with chalk over the figure at least 10 times with each separate hand.

STEPPING STONES

6" squares of cardboard, footprints or paint. Black squares represent left foot and red squares represent right foot. Arrange squares so as to require child to take steps of different lengths and different directions.

PURPOSES: To develop ability to change control of legs and trunk
To develop eye-foot coordination
To develop laterality

METHODS:

1. With a red stripe on the right foot and black strip on the left foot, the child is told to put the right foot only into those blocks on the floor that match the color stripe on his right foot. Do same with left foot.

ROPE LADDER

Rope taped to floor to form a ladder design approximately 10 feet long.

PURPOSES: To develop eye-foot coordination
To develop ability to change control of legs and trunk
To develop laterality
To develop spatial relationships

METHODS:

1. Child is to hop with both feet into the sections of the ladder. This should be done twice at least. More if he is experiencing difficulty.
2. Then he should hop on one foot through the same pattern. Repeat again with the other foot.

BALL BOUNCING

PURPOSES: To develop auditory discrimination

METHODS:

The instructor bounces a rhythmic pattern while the child watches and listens. He is then asked to reproduce the same pattern. When the child is able to do this satisfactorily, the process is repeated with the child's back to the instructor so that he must rely entirely upon his auditory ability to repeat the pattern.

OBSTACLE COURSE

PURPOSE: To develop spatial relationships
To develop translation of movement into space

METHODS:

The child is to alternate over and under the obstacles as they are sequenced without touching them.

MARBLE TRACK (See attached sheet for illustration)

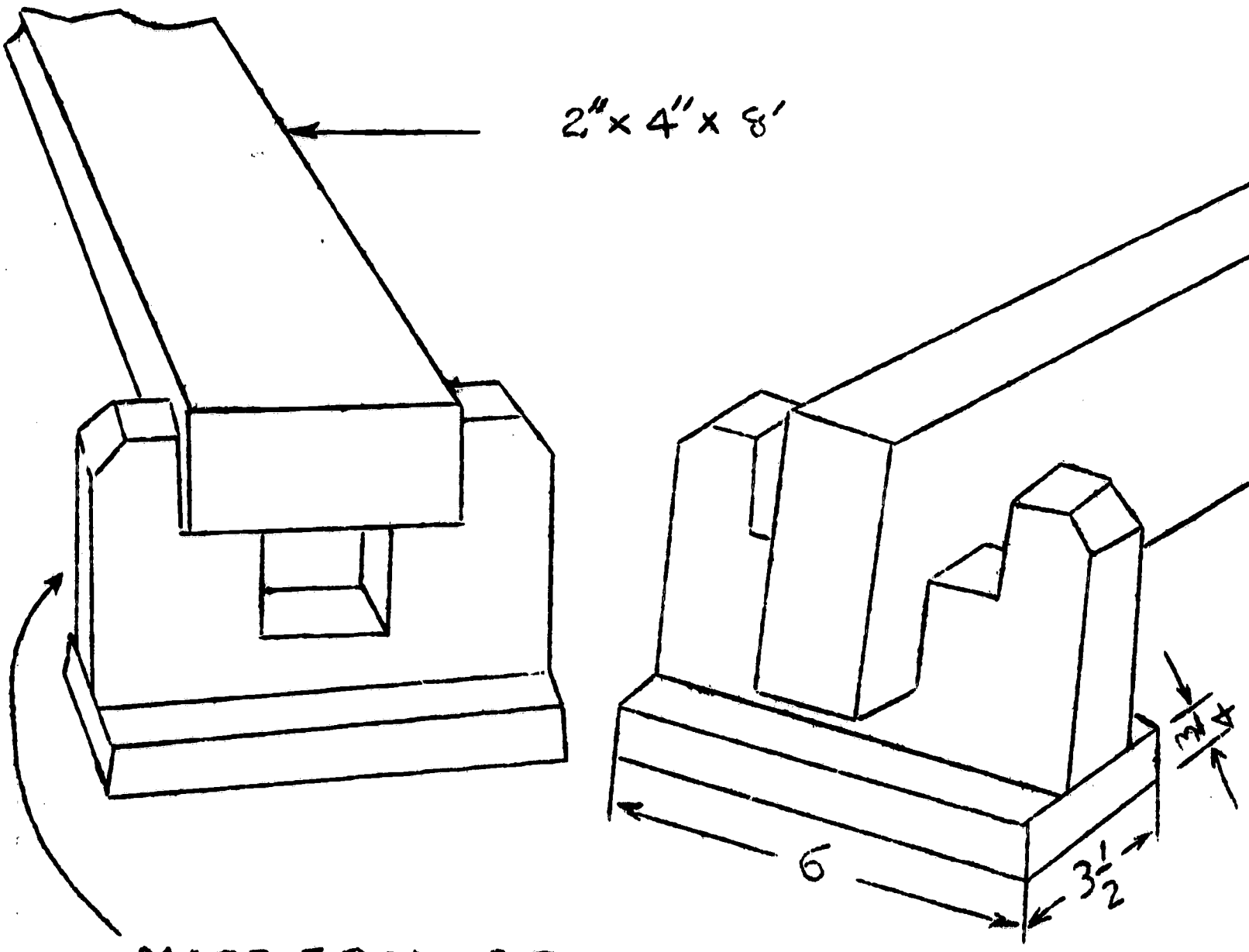
PURPOSES: To develop ocular mobility

METHODS:

1. The child stands directly in front of the marble track. His eyes follow the moving marble as it follows the track. (monocular-training)

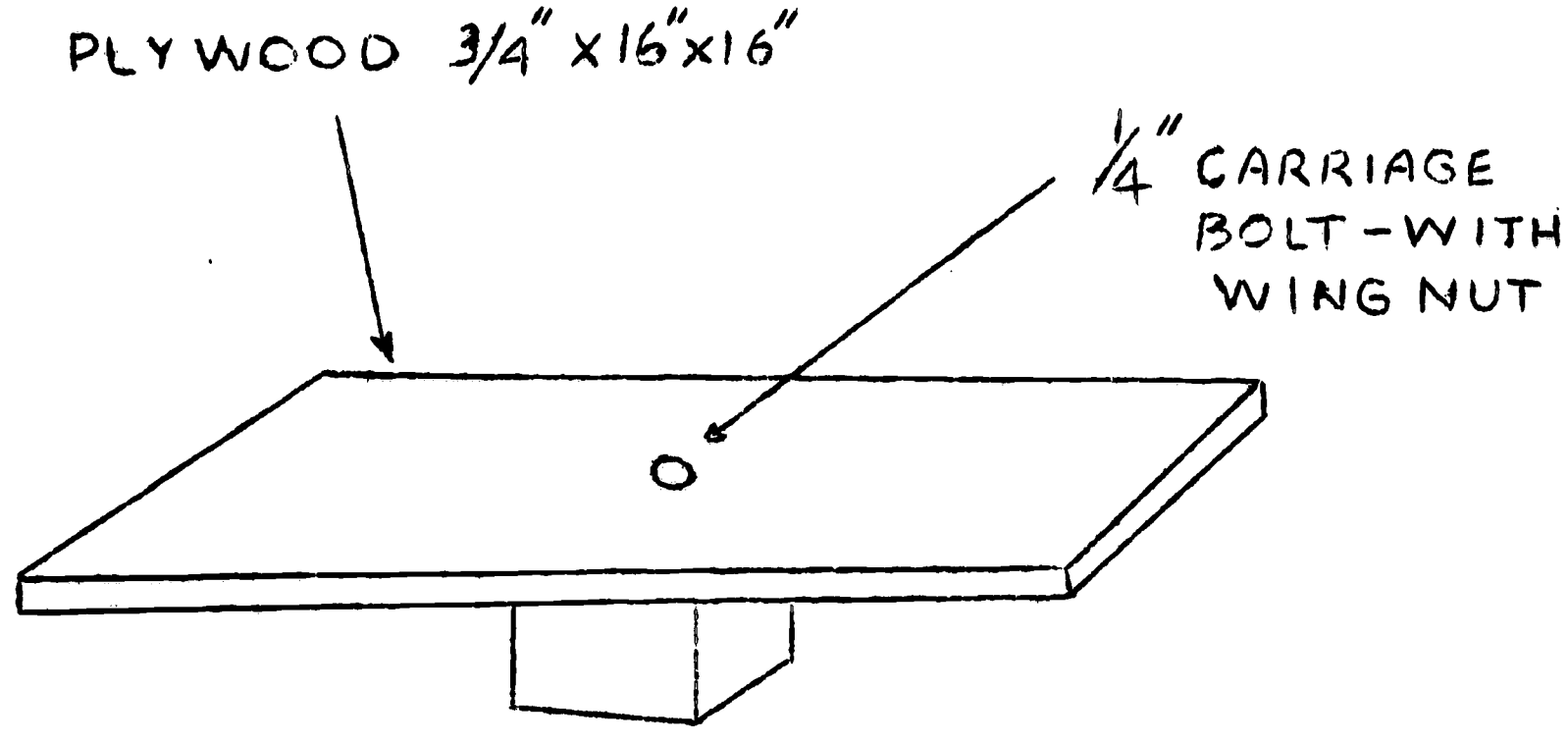
2. Track the marble first with one eye occluded. Then the other eye occluded. (binocular-training)

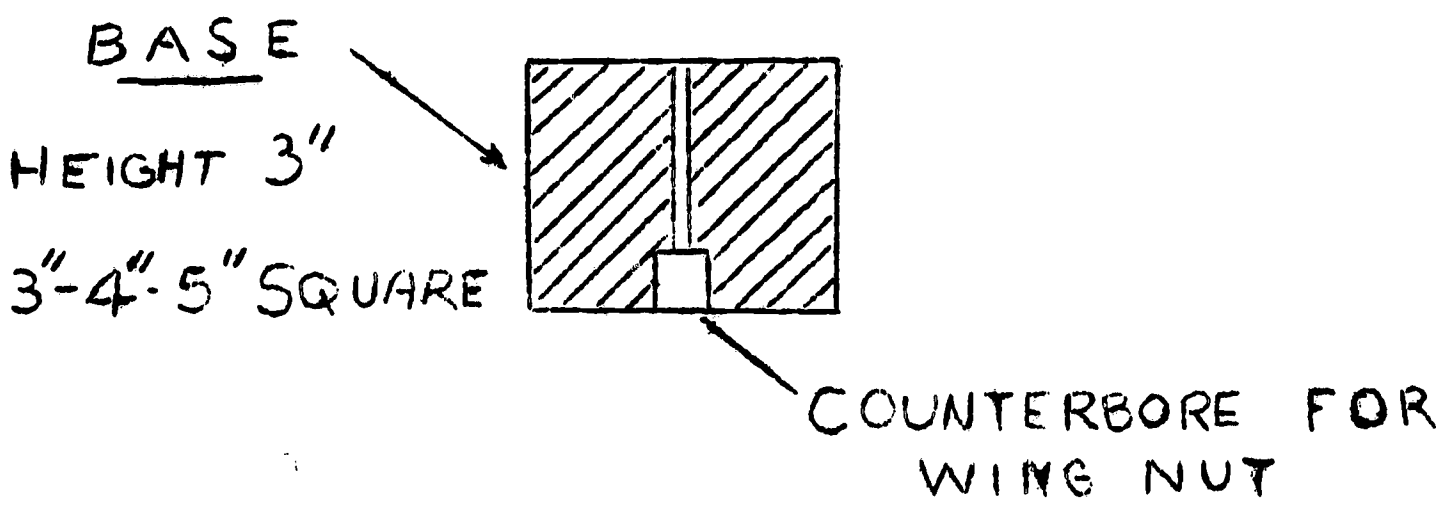
WALKING BOARD



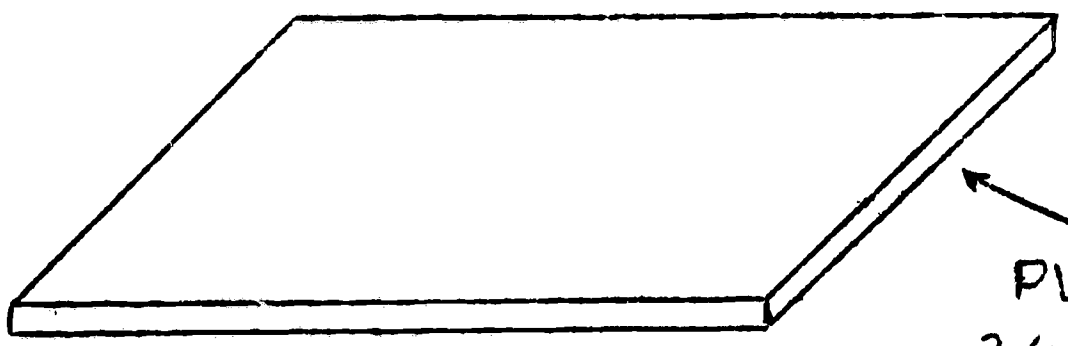
MADE FROM STANDARD 2 x 4

BALANCE BOARD

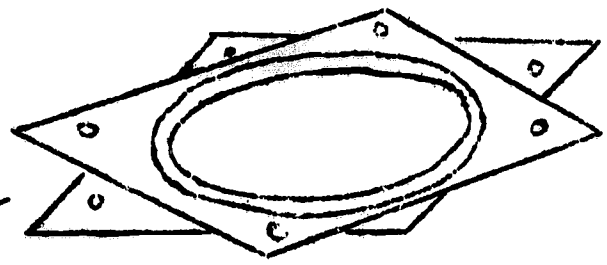




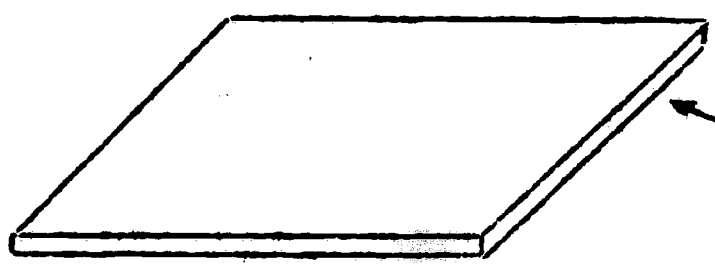
TWIST BOARD



PLYWOOD
3/4" x 9" x 12"



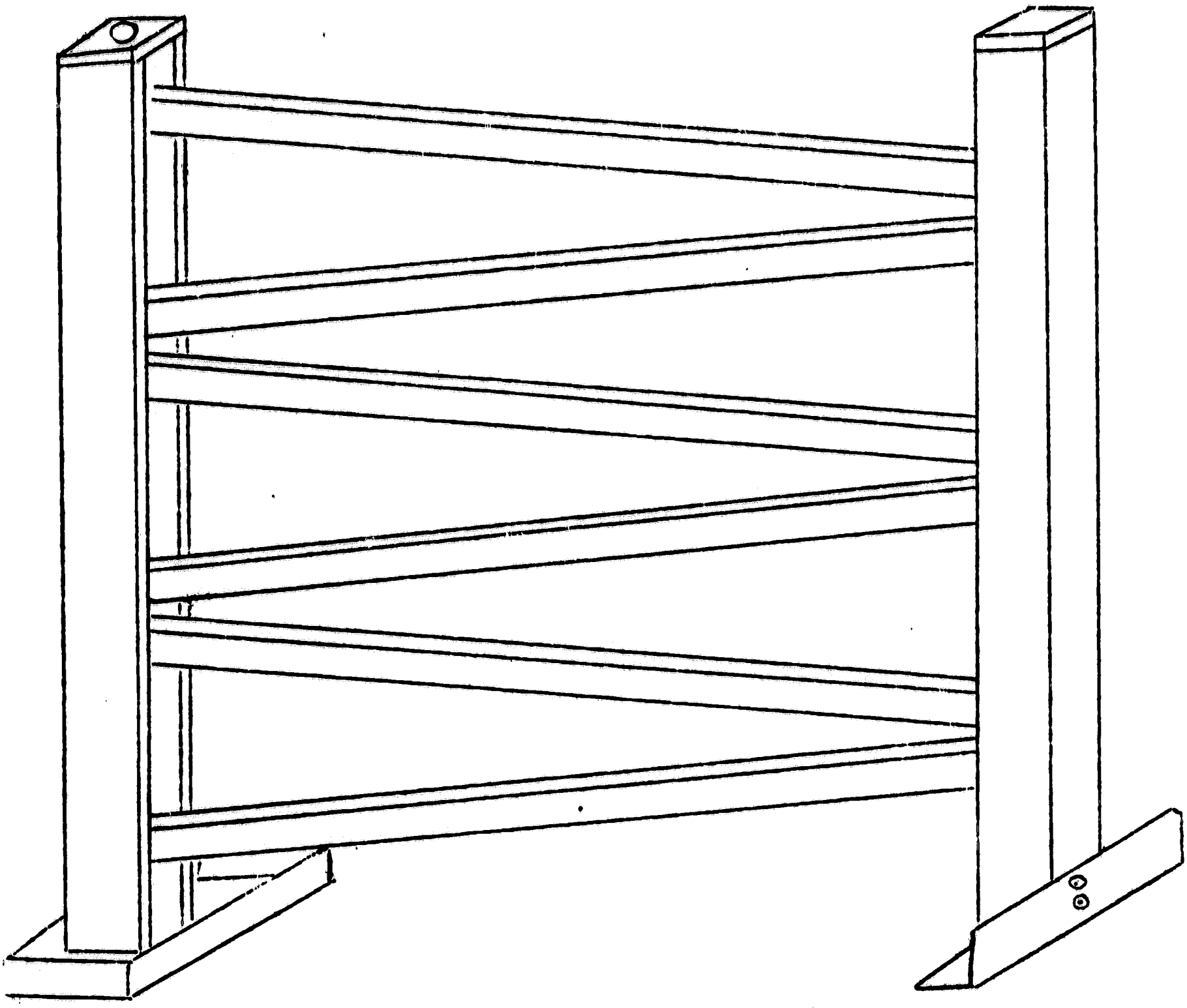
6" LAZY SUSAN
BEARING

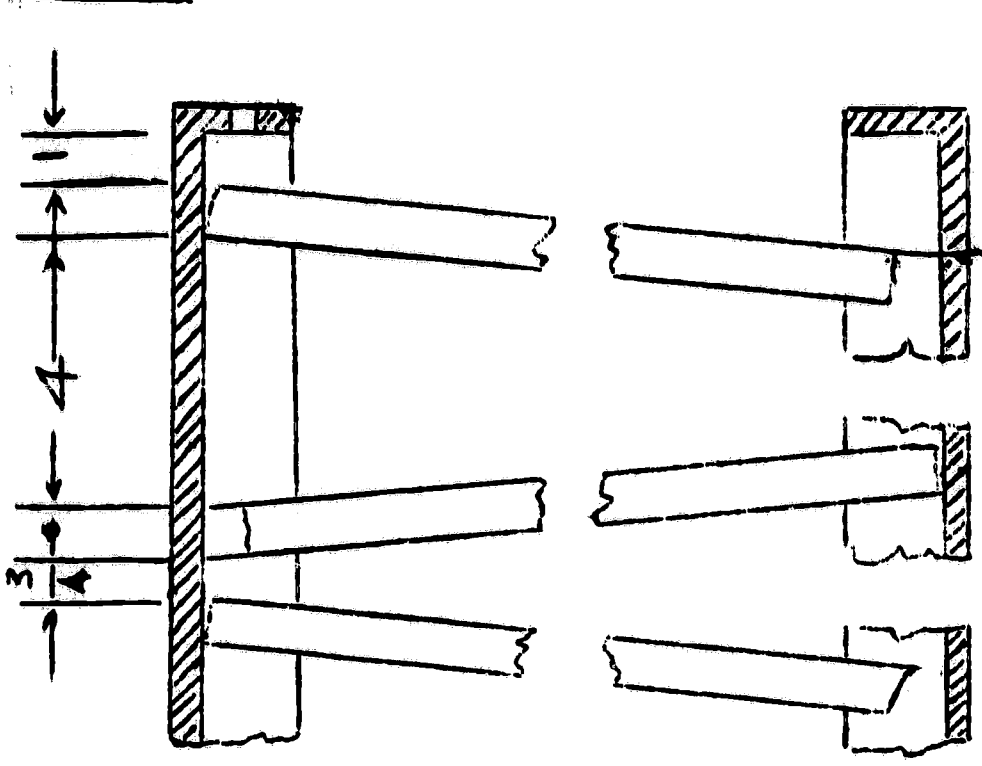


PLYWOOD
6/3" x 7½"

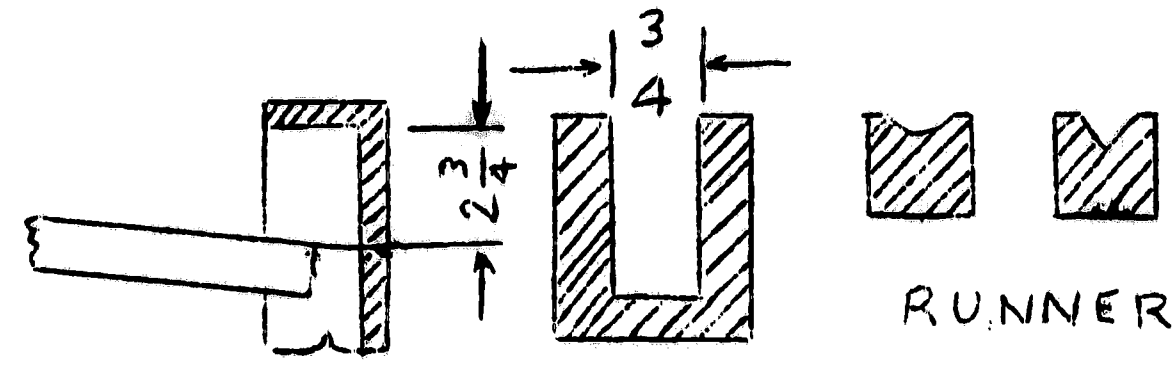
ASSEM. BASE WITH 3/8" METAL SCREWS - PAN HEAD
ASSEM. TOP WITH 5/8" METAL SCREWS - PAN HEAD

MARBLE TRACK





RUNNER ASSEM.



RUNNER

POST (EITHER DESIGN)
POST - 2 x 4 CUT LENGTHWISE
22" LONG

RUNNER - 3/4" x 3/4" x 23"

BASE - METAL OR WOOD
(PAN - APPROX. 3" x 6")

INSERT V

RHYTHMS AND PATTERNING

The children with whom we are working have difficulty in the reproduction of rhythmic patterns and tonal patterns. The problems that they encounter in sequencing temporal activities is not isolated in the area of music. It is readily visible in their classroom or academic performance. In the area of reading these children demonstrate their inability to sequence by placing letters and syllables of words in improper order. Verbally when repeating nonsense rhymes the order of words is disarranged. The simple task of jumping three times on their right foot followed by two times on their left foot and repeating the pattern until asked to stop is an impossible sequencing task for many.

These inadequacies make it necessary that we provide learning experiences through which such children can overcome their disabilities. Through the activities listed below, remediation in these areas can be provided. In addition to providing experiences in sequencing these activities can assist in providing left-right discrimination.

These are a few activities upon which many variations can be based. It is recommended that teachers proceed through the suggested steps very slowly, taking adequate time for practice on each step. Do not be surprised if considerable regression occurs over long weekends and holidays. The acquisition of these skills is slow. It will take daily repetition of the activities for an extended period before retention of the skills is permanent.

With all the exercises that are done the teacher must be sure not to go too fast for the children nor to be too anxious to move on. This exercise should be repeated over and over and have it almost perfect before using music with it. Even after you try it to music, if the children are bothered by the music, do not hesitate to go back to the exercise again <u>without</u> music. It may take several weeks before any music can be used. Use music that has a good strong $\frac{2}{4}$ or $\frac{4}{4}$ beat. Do

it slowly at first then a little faster. Always remember as you face the children you do the exercise opposite as to what they do. For example: They cross left over right -- you cross right over left.

If at all possible the number of children in a group should be limited to no more than 10. The ideal group would be 5-7.

(1) Rhythm Pattern

Pat legs twice

Clap hands twice

Cross left wrist over right twice (fist is clenched)

Cross right wrist over left twice

All this is done to the count of 1, 2.

Repeat entire pattern making sure child has hands clenched in fist as he crosses his wrist and also that it is done at the wrist bone.

After this has been accomplished (it may be several months) move to rhythm sticks, using the same pattern. Use sticks of different colors--e.g., one green, one blue - green in left, blue in right.

(2) Another Exercise

Pat two with left hand 1, 2

Pat three with right hand 1, 2, 3

Reverse this pattern:

Pat three with left hand 1, 2, 3

Pat two with right hand 1, 2

(3) Rhythm Game

Pat legs twice

Clap hands twice

Snap left fingers once

Rhythm Game (Continued)

Snap right fingers once

Leader is always No. 1. On first snap of fingers call 1, another number on second snap, e.g., 1-4. Number 4 then becomes leader upon next snap of fingers and calls 4-7 or any number. Always call your number first than another number.

(4) Another Exercise

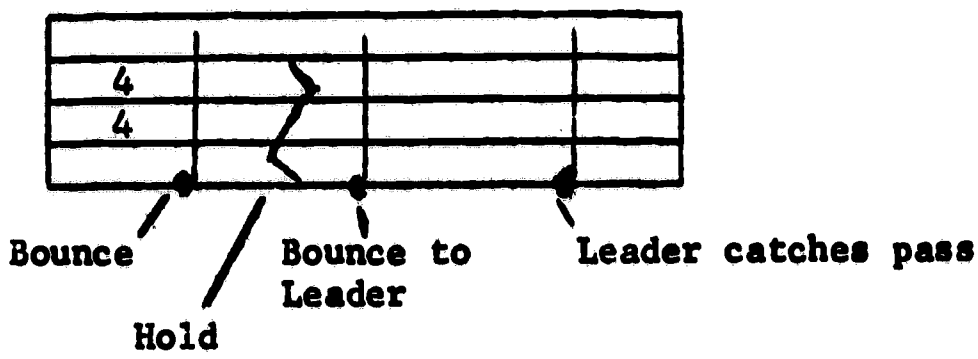
Bounce ball to count 1, 2

Bounce to leader on 3

He catches on 4

Repeat this.

This is a much harder pattern and exercise to do and should not be done until the others have been very well mastered. This activity can be varied and made still more difficult by bouncing on the count of 1 and holding through the count of 2 as though observing a rest in a measure of music. As example:



Because of the difficulty that these children encounter in structuring a temporal void many of this type of experiences are desirable. Clapping on the first, third, and fourth beat and pausing on the second is a profitable variation. The rest need not always fall on the second beat, it may be placed at any point in the measure.