For use with the profoundly and severely retarded, the guide to physical education curriculum describes methods and techniques, objectives, and core activities. The following are also considered: supplementary activities for the hyperactive and emotionally disturbed; suggestions for the teacher; and evaluation, including records, motor skills tests, and behavior rating scales. (JD)
CURRICULUM GUIDE FOR TEACHING

PHYSICAL EDUCATION TO THE PROFOUNDLY
AND SEVERELY RETARDED

Department of Physical Education
Mansfield Training School
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Introduction

The range of movement to be found in the profoundly and severely retarded varies from random meaningless movements to the intricate and controlled movements required by such skills as walking, running, catching, throwing, and climbing. The kinds of movements of which they are capable depend upon their mental ability, the absence or presence of physical handicaps, the general level of physical fitness, and past experiences in physical education. Consequently, the activities selected for the program and the techniques of teaching will vary in accordance with the attributes of the child and his reaction to the instruction.

Successful teaching of motor skills to these youngsters requires a very low teacher-pupil ratio. Under the most ideal circumstances, that is, where the children are active and cooperative, a teacher may be able to work effectively with three or four students at one time. If the students have limited movement ability or are active but uncooperative, a one to one ratio is necessary unless teacher aides are available to assist the teacher.

Until these students become well advanced, they are incapable of continuing an activity on their own while the teacher works with other students. They will, therefore, simply stand or sit until the teacher comes back to them, or roam around the play area, perhaps wandering away or engaging in distracting or destructive activity. Consequently, meaningful teaching can occur only when the teacher-pupil ratio is small.
Methods and Techniques

The methods of teaching physical education to these students are basically the same as those used in teaching normal youngsters, but there are, of course, limitations to their use due to the abilities of the students.

Manual kinesthesia, in which the teacher leads the child through the desired movements to establish the motor pattern of a particular skill, is the most successful method of teaching these students; it is also the least limited. When using this method it is important that the teacher move the child's body in the same way each time. For some skills, such as rolling over, it may be necessary to use two people to help the child execute the movement. The hold taken on the child should be firm and reassuring so there will be no confusion about the nature of the movement and also to give him confidence in performing the movement.

Some children will resist when a hold is taken in the attempt to guide them through a movement. The best technique for coping with this problem is simply to leave the child alone for a few moments and then try again. Do this as often as necessary until the child relents or until it becomes obvious that he is not going to cooperate.

Demonstration, in which the teacher shows the students how to perform a skill, has limited use with these children. However, it can be used with activities simple enough for the children to mimic such as clapping the hands or stomping the feet.

The demonstration should be made so that the child may attempt the activity at the same time it is being demonstrated. In some cases it may be desirable to use manual kinesthesia at the same time the demonstra-
tion is taking place. An example of such a situation is running in which the demonstrator would pull the child with him as he demonstrates the techniques of running. Sometimes it will be necessary to use two people, one to demonstrate and the other to lead the child through the movements.

Verbalization, the use of the spoken word as a method of teaching, has definite limitations with these youngsters. However, it is possible to teach the children a limited number of words related to the skills they are learning. Examples of such words are sit, grasp, step over. Only one or two words should be taught during any given period. The word that is being taught should be repeated over and over as the action it describes is being demonstrated by the teacher or performed by the student. The word should be used alone rather than in a sentence. This does not preclude speaking to the children in sentences. Rather, it is highly desirable that such communication take place because hearing words is important to their potential language development. The children tend to respond to the tone of the speech even when they do not comprehend the meaning.

Operant conditioning is a technique utilizing a reinforcement (a reward of some sort consistently given for a specific behavior immediately after the action). For some students, praise or knowledge that the attempt was successful is sufficient reinforcement. For others, especially those lower on the scale of retardation, a reward of candy is effective. In the use of reinforcement the time between the reinforcement and the desired behavior must be as short as possible; otherwise the child is not always certain what he is being rewarded for. The reward should be given consistently and given only for performance at maximum capacity.
A movement that is made up of two or more parts must be broken down into its components and each taught separately. For example, the movement pattern of reaching for and picking up a ball may be broken down to these components: 1) a movement in the direction of the ball, 2) touching the ball, 3) placing the fingers around the ball, and 4) lifting the ball up. The student is first encouraged to reach for the ball; any effort to do so is rewarded with candy and words of praise. Thereafter, the reward is given when the student reaches the same distance or a greater distance than his initial effort. Whenever he reaches a greater distance, bringing his hand closer to the ball, the new distance becomes the point of reinforcement. When the student finally touches the ball, this becomes the point of reinforcement; likewise, when he grasps it and when he picks it up. After the student has mastered the skill, the candy reinforcement is slowly withdrawn by offering it only periodically. Praise and approval continue to be given for successful effort. Eventually they can be used entirely as the reinforcer.

Objectives

The objectives of this curriculum guide have been developed to identify reasonable goals that can be reached through physical education rather than to set limits upon the goals that should be pursued. Also, the objectives are ones for which evaluation procedures can be developed to measure with some degree of accuracy the success in achieving them.

General Objectives

1. To develop basic skills of movement that will aid the student to perform more effectively the everyday skills of life such as lifting
the feet over obstacles, climbing, running and jumping.

Developing motor skills in the core activities (described in the next section) adds to the repertoire of basic skills that enable a child to make meaningful and effective movements in play and everyday activities. Moreover, these skills are prerequisite to the development of physical fitness and to the creation of opportunities for increased social interaction with other people.

2. **To encourage participation in various forms of movement in order to maintain or increase physical fitness.**

All of the core activities listed below will lend themselves to the development of physical fitness. The running activity is especially important. The amount of benefit is dependent upon the initial physical condition of the child. For one whose activity has been limited to sitting in a chair most of the day, almost any body movement will constitute a physiological overload and hence contribute to positive changes in physical fitness.

3. **To encourage the ability to communicate and to respond to directions in physical education.**

Through the use of verbalization as a method of teaching, the teacher encourages the development of the ability to communicate and to respond to direction. Contact with the physical education teacher gives the student one more opportunity to relate to verbal people and to hear speech directed toward him.

4. **To reinforce certain aspects of self-care, health, and safety that are related to physical education classes.**

Self-care instruction by the physical education teacher is necessarily limited, but certain self-care skills and abilities can be
reinforced in the class such as tying a shoe that has come untied, going to the toilet, etc. The physical education teacher should become familiar with the teaching techniques used by the teachers responsible for teaching self-care skills so that he may employ the same general procedures and so avoid creating possible confusion in the mind of the student.

To promote safe use of equipment used in physical education, the teacher will find the technique of giving approval for good safety practices and withholding approval for unsafe ones the most effective procedure. Sometimes it will be necessary to remove the child from the activity or equipment that has prompted his unsafe conduct.

5. To encourage interaction with another person in a play situation.

It is to be expected that the interaction among these students will in the beginning be very limited. The most meaningful contacts will be between the student and the teacher. As the students become more socially advanced, opportunities should be created for two or more to perform together or cooperate in the accomplishment of an activity.

6. To aid the development of the ability to be a part of an orderly play or activity group.

The development of the ability to be part of an orderly play group is not so much dependent upon the nature of the activity as upon the kinds of experiences the child has in the group. A discussion of how to promote favorable experiences may be found in "Suggestions for the Teacher."

In the selection of objectives there has been an attempt to avoid the more abstract objectives that can be expected to be achieved in
good programs of education for the mentally retarded--objectives that are not necessarily the sole prerogative of physical education but can be accomplished in a good education program for the mentally retarded through varied experience in different subject areas. Yet these "abstract objectives" should be taken into consideration by the physical education teacher because they are inevitable results of good teaching, regardless of the subject area being taught. They are the products of a kind, considerate, sympathetic, and concerned teacher--a teacher who gives attention to and involves students and motivates them to accomplish the desired goals.

Examples of such objectives are: (1) to develop a sense of belonging, being a part of something worthwhile; (2) to develop courage, self-confidence, and poise; (3) to instill a feeling of success when one has contributed to the limit of his ability; (4) to develop ability to adjust to difficult situations; (5) to develop an awareness of things happening around one; (6) to develop the ability to get along with others; (7) to encourage friendliness and kindness toward one's associates; (8) to develop independency (avoidance of excessive dependency); (9) to develop control over one's emotions and channel aggressive action into acceptable practices.

Activities

In planning the activities to accomplish the general objectives of the physical education program, the activities listed here should be thought of as the core of the curriculum; they should not be considered the only activities that can be offered. Additional activities can and
should be added to the recommended core. In selecting the additional activities, the teacher must assess the objectives that will be achieved through participation in them. The teacher must be able to identify positively the objectives that can be satisfied and the means of evaluation that will be used to determine if the objectives were accomplished before including the activities in the curriculum.

This does not mean that experimentation with activities whose values or contributions to the objectives are not known should never occur. However, a teacher who includes such activities should recognize the experimental nature of their use and should evaluate the results and keep records of the outcome so that a valid assessment may be made of the contributions of the activities in the achievement of the objectives.

**Core Activities:** 1) crawling, 2) rolling, 3) walking up and down stairs, 4) running, 5) grasping objects, 6) throwing, 7) catching, 8) balancing, 9) jumping off obstacles, 10) stepping over and in objects, 11) bouncing, 12) climbing over, upon, and off objects, 13) kicking.

**Methods and Techniques for Teaching the Core Activities** (Suggested method is the one most frequently used. It does not preclude the use of others.)

1) Crawling (hands and knees, belly, knees): demonstration, kinesthesia
2) Rolling: demonstration, kinesthesia
3) Walking up and down stairs: demonstration, kinesthesia
4) Running: demonstration, kinesthesia (pull by the hand or use rope around the waist)
5) Grasping objects with hand: kinesthesia (to force student to use one hand only on a small ball, give him two balls)
6) Throwing: kinesthesis (use 3" or larger ball; use a tire as a target for dropping the ball in the beginning and gradually increase the distance from the tire)

7) Catching: kinesthesis (use 8" ball, in the beginning use short distances and place the ball into the hand)

8) Balancing: kinesthesis (use wide beam; guide along beam)

9) Jumping off object: kinesthesis (use object or beam no higher than 2' in the beginning; start by pulling pupil off balance)

10) Stepping over and into objects: kinesthesis (use tires, boxes, beams)

11) Bouncing: kinesthesis (use trampoline; start pupil by bouncing the bed; later a jouncing* board may be used)

12) Climbing: kinesthesis (use a ladder or Swedish box)

13) Kicking: demonstration, kinesthesis (use large soft rubber balls or heavy cardboard boxes)

**Supplementary Activity for the Hyperactive and Emotionally Disturbed**

There is some evidence to indicate that those hyperactive and/or emotionally disturbed youngsters, who are under constant supervision so that their every movement is directed by someone, need an opportunity to engage in physical activity of their own choosing. It has been found that giving these children freedom to participate in any kind of activity they wish for a few minutes after they come to the gymnasium or playground for physical education is highly effective in reducing tension and calming them for instruction and more structured activity. The children are allowed to run, jump, shout, roll on the floor, bang objects, or stand

*A board 1" thick 6" to 8" wide and 6' long balanced on two supports.*
completely still in one spot. The only restriction upon their choice of activity is that they must not do injury to themselves or to another child. Equipment that could be damaged or injurious to the child is removed from the area. Cardboard boxes are an effective substitute for equipment that is not expendable; they can be struck, kicked, and torn apart without fear of damage or injury.

Suggestions for the Teacher

Research has shown that a large percentage of these students do show a positive change in motor ability and behavior as the result of exposure to a well planned and presented program of physical education. For some, progress in improvement is dramatic and great positive changes are made in a short time; for others the improvement is more subtle and gradual, extending over long periods of time. Improvement of some degree can be expected in most of the students, especially among those who have been denied throughout their lives opportunities to participate in motor activities.

Teaching these students requires great patience and kindness. The teacher should never resort to pressure tactics to achieve improvement. His attitude must be that improvement may come very slowly and he must work patiently with the student until it comes.

Praise should be offered generously for any effort the student makes. The effort may not result in successful performance, but the fact that it was made should be recognized by the teacher and favorably commented upon.
Firm control of the students must be exercised without resort to threats and corporal punishment. Discipline must take a form that the child is capable of comprehending. Punishment and withdrawal of privileges have very little meaning for these children. Praise for good conduct and withholding approval for poor conduct are much more effective because most children understand these.

Unruly or hyperactive students must be restrained when in danger of hurting themselves or others. This is most effectively accomplished by focusing their attention on another kind of activity or, if necessary, gently but firmly holding their arms or feet or other parts of the body. If a child has been endangering others, he should be gently removed from direct contact with them. (For description of an activity for the hyperactive and emotionally disturbed, see page 9.)

Two or three different activities may be presented in one class period. If a child refuses to participate in one kind of activity, he may take part in another. Participation in any one activity should be rather short. Retarded children perform best the first few times they do a skill. Consequently, it is to their advantage to end the practice period before boredom or frustration sets in. After leaving one activity the teacher may return to it in a few minutes or at some time before the period is over. The same activities should be presented every day until learned. After the skills of an activity have been mastered, new activities may be introduced; but the skills already learned should be reviewed briefly from time to time.

Special efforts may be required to evoke responses from torpid youngsters. Such students are particularly in need of physical activity but show no interest in play. The physical education teacher must
endeavor to arouse interest and awaken their sensibilities. To do this it may be necessary to force the torpid child to display a physical response by, for example, tossing balloons at him so that he will raise his arms to protect himself or will attempt to catch or dodge the balloons. From the use of balloons, the instructor may progress to beanbags and large soft rubber balls which would not hurt the child if he failed to ward them off. Eventually the child can be taught catching, throwing, and other simple motor skills. The use of manual kinesthesia also will be helpful in encouraging this youngster to respond and participate in an activity.

It will be necessary to adapt, substitute, or eliminate certain activities for those students with physically handicapping conditions. The same principles that guide the planning and presentation of the program for the mentally normal but physically handicapped child apply to the mentally and physically handicapped child.

Evaluation

Evaluation in physical education for the severely and profoundly retarded seeks to measure individual progress and also to determine the extent to which the objectives have been achieved. All too often the thoughtfully planned objectives for a physical education program are ignored in the actual teaching process. Few objectives can be realized without special effort being directed toward their accomplishment. To determine how practical the objectives of the program are and the extent to which they may be accomplished, testing and evaluation are necessary before and during the teaching of the activity as well as after exposure
to the activity for a period of time. Methods of evaluation appropriate for use with this group of retardates are records of personal observation and certain objective and subjective tests.

**Records**

Careful observation should be made by the teacher of the quality of performance and the behavior of the students during the physical education class. The observations made should be recorded in brief form as soon after class as possible. The notes made on each student can be used for writing up an evaluation of the student's progress at the end of a designated period. They will also reveal a good deal about the effectiveness of the teaching methods and materials utilized.

**Tests**

**Motor Skills Test**

Only the highest score is recorded for each test item.

1. **Crawling**
   0 - Makes no attempt at crawling
   1 - Makes some attempt at crawling
   2 - Crawls with a shuffle
   3 - Crawls alternating feet and hands
   4 - Can walk on knees without use of hands

2. **Rolling**
   0 - Makes no attempt at turning
   1 - Turns from front to back
   2 - Turns from back to front
   3 - Does a complete roll
   4 - Does two or more rolls

3. **Walking Up Stairs**
   0 - Refuses to go up stairs
   1 - Walks upstairs at least one step with help
   2 - Walks upstairs - two feet on one step with help
   3 - Walks upstairs - alternating feet with help
   4 - Walks upstairs - alternating feet alone
Walking Down Stairs

0 - Refuses to go down stairs
1 - Walks downstairs at least one step with help
2 - Walks down stairs two feet on one step with help
3 - Walks down stairs alternating feet with help
4 - Walks down stairs alternating feet alone

4. Running

0 - Refuses to run while being pulled
1 - Takes long walking steps while being pulled
2 - Takes running steps while being pulled
3 - Jogs (using toe or flat of the foot)
4 - Runs (both feet are off the ground at same time)

5. Grasping Objects with Hand

0 - Makes no attempt to reach
1 - Reaches toward object
2 - Touches object
3 - Grasps object
4 - Lifts object from support

6. Throwing a Ball (one hand)

0 - Does not attempt to throw
1 - Grasps ball and releases ball in attempt to throw
2 - Throws or tosses ball a few feet any direction
3 - Throws or tosses the ball several feet in intended direction
4 - Throws the ball 30 feet or more in intended direction

7. Catching (Bean bag is tossed to subject from 4 or 5 feet away)

0 - Does not attempt to catch the bean bag
1 - Holds both arms out to catch
2 - Moves arms and/or hands in attempt to catch
3 - Catches the ball at least 50% of the time
4 - Catches the ball 90% of the time

8. Balancing (4" beams)

0 - Stands on beam but does not walk
1 - Takes at least two steps on beam with help
2 - Takes at least five steps on beam with help
3 - Takes at least two steps without help
4 - Takes at least five steps without help
9. **Jumping Off Objects (2 foot high object)**

0 - Does not land on feet when pulled from object but must be held up
1 - Lands on feet or one foot and maintains balance when pulled from object
2 - Steps down by self in a jumping action
3 - Jumps off and lands on both feet and maintains balance when pulled gently
4 - Jumps by self and lands on both feet

10. **Stepping Over and Into Objects (3 old tires)**

0 - Makes no attempt
1 - Puts one foot in a tire
2 - Puts two feet in the same tire
3 - Takes two steps alternating feet
4 - Takes three steps alternating feet

11. **Bouncing on Trampoline**

0 - Fails to respond when the bed is bounced by teacher
1 - Attempts to maintain balance when bounced by teacher
2 - Bounces by self on all fours
3 - Attempts to bounce while on feet
4 - Maintains control of body while bouncing on feet

12. **Climbing (Swedish box or high wooden box)**

0 - Does not attempt to climb over box
1 - Touches box and attempts to climb it
2 - Climbs on box with help
3 - Climbs on box without help
4 - Climbs on and over box without help

13. **Kicking (Large soft rubber ball or volley ball)**

0 - Does not attempt to kick ball
1 - Pushes ball with foot in attempt to kick it
2 - Kicks ball a few feet in any direction
3 - Kicks ball a few feet in intended direction
4 - Kicks ball 30 feet or more

The score of two represents average ability to perform the motor skill of students whose IQ is in the range of 0-34 and who are not physically handicapped. A total score may be calculated by adding the scores of the test items and dividing by the number of test items administered.

A comparison of the total score achieved on the test before and after a given time of instruction may show that physical fitness as well
as skill has improved; this is especially likely if the student's activity was extremely limited before taking part in the program. An improvement in the score may also indicate an increased ability to understand directions.

It is highly recommended that a permanent record be kept of each student's test scores and the observations made by the teacher(s).

Behavior Rating Scale

Ratings should be made early in the instructional program and again after the student has participated in the program for several months. It is recommended that a supervisor in the residence where the student resides also make the ratings at the time the teacher is making them as an evaluation of the possible extent to which the changes in behavior shown in class are carried over to his daily life.

The validity of the rating is generally increased when more than one rater is used and an average (mean) is taken.

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<tr>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Frequently</th>
<th>Most of the time</th>
<th>Unknown</th>
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<tbody>
<tr>
<td>Overly aggressive in relationship with others</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Belligerent: strikes, hits, attacks others</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
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<tr>
<td>Alert to happenings around him</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
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<tr>
<td>Destructive to equipment and facilities</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Destructive to himself</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
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</tr>
<tr>
<td>Loud and boisterous</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
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<tr>
<td>Withdraws from situations</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<td></td>
<td>Never</td>
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<tr>
<td>Attempts a task even when difficult for him</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Participates in meaningful movement on his own initiative</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td></td>
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<tr>
<td>Takes simple directions</td>
<td>0</td>
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