PROJECT P.L.A.Y.
Programmed Leisure activities for Autistic Youth

PROJECT DIRECTORS
Ann J. Savel and Sally A. Leme
Adapted Physical Education Instructors
Grant Wood Area Education Agency

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Most importantly to all of the autistic students who showed us what did not work and led us to what did
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WHAT IS AUTISM?
WHAT IS AUTISM?

Autism is a brain disorder, but to date no specific etiology is known. In short, scientific evidence indicates that the symptoms which make up the autistic syndrome are caused by a subtle form of brain damage occurring before, during, or shortly after birth, and that this damage is a result of metabolic, infectious, genetic, or other disease activity including perinatal cardiorespiratory distress. There is also a suggestion that chemical insult could result in the same sort of damage to developing brain structures. (Warren, 1980, p. 3)

Autism is a very misunderstood disability and has caused diagnostic confusion since the syndrome was originally described by Kanner in 1943. Kanner, after systematically observing 11 children, outlined the following behavioral features:

- Normal physical appearance
- Inability to develop relationships with people
- Repetitive and stereotyped play activities
- Lack of imagination
- Delayed speech acquisition
- Non-communicative use of speech following development
- Delayed echolalia
- Pronominal reversal
- Insistence on sameness (i.e. resistance to change)
- Good rote memory (Kanner, 1943)

These behavioral traits have been formulated by Michael Rutter into four essential criteria used for the diagnosis of autism (1978). There are, however, as many manifestations of these criteria as there are individuals. Children must exhibit behaviors in all four areas to be diagnosed as autistic.

1. Age of onset is before 30 months
2. Impaired social development is out of keeping with the child's intellectual level (i.e. social age is below mental age)

   Examples: lack of eye contact, failure to develop social relationships, failure to perceive or acquire socially acceptable behaviors (Nichols & Quinn, 1981).

3. Delayed and deviant language development is also out of keeping with the child's intellectual level

   Examples: lack of speech, immediate or delayed echolalia (child repeats what is said to him/her immediately or after a period of time), speech is not used to communicate even if fluent, I/you pronomial reversals, impaired comprehension of other's language, frequent and long lasting repetition of stereotypical phrases (Nichols & Quinn, 1981).

4. Insistence on sameness - resistance to change

   Examples: Compulsive rituals (touching, mouthing, or smelling objects); repetitious, non-imaginative play patterns (spinning scooter or rollerskate wheels, continuously dribbling a basketball); behavioral outbursts when routines are changed which may take the form of self abuse (hand biting or head banging), tantrums, or aggressive acts; intense attachment to particular objects (pipes, ladders, balls) (Nichols & Quinn, 1981).

Although all persons diagnosed as having autism meet criteria in the four areas mentioned, they cannot and should not be stereotyped. "There are wide differences between individuals and substantial changes may be brought about by maturation and education within individuals" (Nichols & Quinn, 1981). There appear to be four factors which affect prognosis and indicate the degree of change that may be possible. First, IQ tests and subsequent scores, when administered by one familiar with autism, accurately reflect current ability level and
predict future adjustment. IQ scores of autistic children fall in the following ranges:

- 10 - 11% have IQ scores above 80
- 19 - 25% have IQ scores ranging from 55 to 80
- 70% have IQ scores below 55

(Nichols & Quinn, 1981)

Thus, mental retardation is a concomitant disorder for the majority of autistic persons. Secondly, if the child has developed some language before the age of five or six, the prognosis toward independence is better. The development of appropriate play skills and play with toys before the age of 5 or 6 also favorably impacts on the prognosis. The final factor affecting the prognosis is the absence of neurological dysfunction (i.e. seizure disorder). In summary, the age of language acquisition, combined with the assessed level of intelligence, is the best predictor of future adjustment.

According to incidence studies done in England and Denmark, there are approximately five autistic persons per 10,000 population. Lorna Wing conducted a re-evaluation of prevalence in 1979 indicating that an estimate of 10-12 autistic persons per 10,000 would be conservative. The National Society for Autistic Children and Adults reports incidence figures of 15 per 10,000. The variability in incidence figures may be due to unclear diagnostic criteria. There is also evidence to suggest that higher incidence figures may be reported in lesser developed countries. Since autism is due to brain damage occurring prior to 30 months of age, the relatively poor neonatal, perinatal, and prenatal care in these countries could contribute to higher incidence figures. An interesting statistic from these incidence studies indicates that four out of five autistic persons are male.
In conclusion, autism is a brain disorder causing lifelong problems. It affects approximately fifteen people per 10,000 population and four out of five of those diagnosed as autistic are male. Moderate to severe mental retardation is an associated disorder in over 70% of this population. Autism is not a mental illness nor is it a psychologically based disorder. There is no cure for autism and there is not a "normal" child underneath the difficult behaviors. Autism is a developmental disability whose symptoms become manifest in early childhood and cause severe problems in communication, social behavior and interaction, as well as difficulty in learning.
II REVIEW OF LITERATURE
REVIEW OF LITERATURE

A comprehensive review of literature concerning autism revealed a good deal of research on play, play behavior, play training and behavioral control but a paucity of information regarding actual programming applications of this information. The purpose of the following pages is to describe what is known about the play behavior of autistic youngsters, highlight play training techniques and behavioral techniques used to facilitate appropriate play, overview physical education programming described in the literature, and to apply this information to the development of the Project P.L.A.Y. curriculum.


To the casual observer, it is apparent that the child with autism does not know how to use play forms that are prevalent in normal children. A sterile ritualistic quality is seen in autistic play that appears to contribute little, if anything, to the child's pleasure. If left to his or her own devices in a playroom full of toys, the child will more than likely ignore the toys and engage in stereotypic self-stimulatory body movements, such as rocking or hand flapping. (1985, p. 139).

Tilton and Ottinger (1964) state that "the salient distinguishing features in the toy play of autistic children are a preponderance of repetitive manual manipulations and oral use of toys, and a paucity of combinational uses" (p. 975). DeMyer (1967) supports this contention observing that autistic youngsters do not demonstrate any dramatic play with dolls or combinational uses of toys. "Autistic children have been considered capable of only a limited, stereotyped form of symbolic play
behavior even in contrast to retarded children, who frequently exhibit symbolic play that is flexible and varied" (Riquet, Taylor, Benaroya & Klein, 1981, p. 439). Thus, the play behavior of autistic youngsters is not only deviant in comparison to normal peers, but also in comparison to mentally retarded peers. In a comparison study of the toy play repertoire of autistic, mentally retarded, and normal peers conducted by Tilton and Ottinger (1964), an analysis of the data revealed "distinct differences among the groups in the manner in which toys were employed" (p. 974). Wing, Gould, Yeates, and Brierly (1977) studied the symbolic play characteristics of 108 children classified as either mentally retarded or autistic. Play behavior was categorized as either symbolic, stereotyped, or no symbolic play and their data clearly illustrate the point that autistic children have very different play behavior. Rather than delayed or retarded play behavior, it seems that the play behavior of autistic youngsters is unique (Watters & Wood, 1983).

A number of studies have been conducted regarding play training and attempts to increase appropriate play (Watters & Wood, 1983; Gaylord-Ross, Harding, Breen, & Pitts-Conway, 1984; Wulff, 1985; Hawkins, 1982; Eason, White & Newsom, 1982; McHale & Olley, 1982; Morris & Dolker, 1974; Riquet, Taylor, Benaroya, & Klein, 1982; and Tiegerman & Primavera, 1981). Although the majority of these experimental studies have been done in very controlled settings with small numbers of subjects, a number of applications may be drawn from this research. Watters and Wood (1983), in their study designed to determine the differential effects of toy class (soft, hard, or wheeled) on the play behavior and self-stimulatory behavior of autistic children found that "soft toys resulted in inappropriate play behaviors and high levels of self stimulation" (p.33). A study conducted by Gaylord-Ross, et.al. (1984) examining the social skill development between adolescent autistic and non-handicapped students found that social interactions between the two groups were increased when objects used to facilitate the interactions were reinforcing to both the handicapped and non-handicapped students. The objects used included a walkman, hand-held video games, and gum. Morris and Dolker (1974)
found that peer training, as an approach to teaching the cooperative task of rolling a ball to a partner was the most effective method in increasing the cooperative play of the autistic student. It was concluded that "peers have considerable potential for facilitating play and social behavior in handicapped children" (McHale & Olley, 1982, p. 83). Thus, based on these studies peer tutoring as well as employing objects or equipment which is reinforcing to both handicapped and non-handicapped students are viable methods of training play and cooperative, social interactions.

Autistic youngsters exhibit a wide variety of maladaptive behaviors including self stimulation, self destruction and tantrum behavior. Students engaged in these behaviors cannot play. "Behavioral programs for teaching social and play skills are generally effective, even with severely handicapped children" (McHale & Olley, 1982, p. 81). In a comprehensive study conducted by Lovaas, Koegel, Simmons, and Long (1973) behavior therapy was used to decrease inappropriate, interfering behaviors. A variety of behavioral techniques were employed. Self stimulation, self destructive and tantrum behaviors were decreased using non-attention to inappropriate behaviors, aversives, or reinforcement of incompatible behavior. This was done simultaneously with a stimulus control procedure (i.e. primary tangible reinforcement for compliance with trainers request). Twenty autistic youngsters were treated, and in all cases inappropriate behaviors decreased and appropriate behaviors (appropriate speech, appropriate play, and social non-verbal behaviors) increased. Thus, a combination of behavior management techniques was found to be very beneficial in eliciting appropriate play behavior in these autistic youngsters. Koegel, Firestone, Kramme, and Dunlay (1974) conducted a study with two autistic youngsters exhibiting high levels of self-stimulation in an effort to determine what effect the suppression of self-stimulation, without any other manipulation of the child's behavior, would have on the level of their spontaneous play with toys. The self-stimulatory behaviors were suppressed using punishment (e.g., No!, and briskly
slapping or immobilizing the child's body part). The level of play increased significantly when the self stimulation was suppressed. The authors concluded that: "Functionally, the present results indicate that little if any appropriate play of an autistic child with high-level self-stimulatory behavior will be spontaneously emitted except when self-stimulation is suppressed" (p. 527). Although punishment was used as the behavioral technique to decrease self-stimulation which produced an increase in play behavior, positive reinforcement can also be extremely beneficial. Eason, White, and Newsom (1982) "examined the effects of reinforcing appropriate toy play in retarded and autistic children as a means of reducing self-stimulatory behavior" (p. 157). Children were trained with two to five of the following toys: Jack-in-the-Box, Perfection Game, Legos, Mr. Potato Head, blocks, puzzles, Etch-a-Sketch, or shape box. No negative consequences were employed, instead children received positive reinforcement and edibles for appropriate play. "Results indicated that the reinforcement of toy play substantially increased the rates of independent, appropriate play in each of the children, and decreased their self-stimulatory behaviors to negligible levels" (p. 157). These training effects were generalized and maintained in a variety of settings and over a period of time.

Modeling and interactive approaches to play training have also been used to teach autistic youngsters play skills. Riquet, Taylor, Benaroya, and Klein (1981) found that "modeling of symbolic play is effective in eliciting higher level play in autistic children although their response at best is confined to a literal imitation." (p. 447). A slight modification of modeling activities for autistic students was reported by Tiegeman and Primarera (1981). They compared the effect of those play procedures on the frequency and the duration of object manipulation. The conditions were as follows:

1. Experimenter imitates the child's movements with a duplicate object.
2. Experimenter performs different movements with a duplicate object.
3. Experimenter performs different movements with different objects.
Although all three procedures significantly increased the duration of object manipulation, imitation of the child's movements with a duplicate object was the most effective technique. In this case, the child's play behavior was modeled by the adult to sustain the object interaction and to develop adult-child interaction. A study done by Hawkins (1982) tried to determine which reinforcement pattern was most effective in encouraging participation in low interest recreational activities of autistic children having normal IQ's. During leisure training, students were given choices between low interest (bowling, balloon play, scooters, frisbee, hoop) and high interest (swinging, tumbling, climbing, balls, trampoline, bowling, balancing) activities under three conditions:

1. Prompt and Praise -
   Students were prompted and praised for engaging in a low interest leisure activity for two minutes. They were then given free choice of an activity for the following two minutes. If the student selected a high interest activity, he/she was ignored for the two minutes and was then prompted to participate in a low interest activity with the instructor.

2. Praise anything -
   Under this condition, the student was allowed a free choice of activity every two minutes and the instructor played with the student.

3. Token -
   Students were given a free choice of activity every two minutes, and a token economy was established. Earning of tokens was contingent upon the student engaging in low interest activities.

The results of this study indicated that merely introducing new recreational activities does not increase the autistic youngsters repertoire of recreational leisure activities. The prompt and praise condition, with its more directive approach, was found to be most effective in expanding participation in recreational activities.
SUMMARY

It seems that the research on play behavior and play training indicates a need to employ a variety of behavioral techniques to encourage appropriate play skills or play with toys. Toys or equipment selected for use with autistic youngsters should be interesting to them as well as age-appropriate and interesting to peers. Appropriate play behavior and manipulation of equipment must be systematically trained, and this training seems to produce a decrease in inappropriate behavior. Modeling and peer tutoring have been shown to be beneficial teaching methods in encouraging participation in play and recreational activities.

After reviewing the literature in physical education, it is apparent that a dearth of information exists pertaining to motor programs for autistic youngsters and the need for programs is obvious. "We lack knowledge and direction in program content and objectives, teaching techniques, and effectiveness of motor intervention, despite the fact that physical education is viewed as fundamental by education and government officials for all handicapped children" (Reid, Collier, & Morin, 1983, p. 201). "Objectives which might be accomplished through physical education activities remain largely unexplored" (Sherrill, 1976, p. 471). "An optimal program should include: 1) a philosophical base of normalization that promotes the integration of handicapped and non-handicapped persons; 2) modifications of equipment, rules, skill sequences, and facilities when necessary; 3) a behavioral approach to training; and 4) generalization of training" (Wehman, 1983, 116). Thus, although the need is apparent and appropriate program components have been delineated, a curriculum applying research findings has yet to be developed. It is in answer to these needs that Project P.L.A.Y. was undertaken.
III MANAGEMENT GUIDELINES

General Teaching Techniques and Strategies
Directions and Organization
Language and Giving Directions
Changing or Stopping Activities
Structuring the Environment
Managing Specific Behaviors
Social Interactions
Generalization
GENERAL TEACHING TECHNIQUES AND STRATEGIES

The overall goal in the educational program of autistic youth is to increase independent functioning. In an effort to meet this objective, systematic, step-by-step teaching methods are essential. Attention must be given to each individual child and his or her level of functioning across domains. Consider the student's cognitive level, communication abilities and modes, behavioral status, motor skill abilities, and reinforcement preferences when designing individual educational plans. Begin with existing strengths or skills in each area and teach new skills based on the child's developmental level. The following techniques and strategies are general in nature. Specific teaching suggestions for each motor skill area appear following each activity section.

DIRECTIONS AND ORGANIZATION

1. Greet each student:

   Teacher: "Hi, John."

   Student: "Hi, Sally"

   Student may need to be prompted.

   If the student is non-verbal, address him/her by name and then shake hands reinforcing the interaction. Use your first name with students as it is easier for them. If you are not comfortable with a first-name basis, shorten your last name to an initial (i.e. Mr. M. for Mr. Montgomery).
2. Give the students the direction for the first activity. "It is time to run." To insure understanding ask the students "What is it time to do?" If you follow a regular routine for the first part of your lesson (sit down, greet teacher, run laps, do exercises), ask the students for the next activity in the sequence. After laps, ask them, "What's next?"

3. Make sure that you have the student's attention when giving a direction. This does not necessarily mean that the student needs to give you eye contact.

4. When giving directions, make the command short and precise. Directions should be given one step at a time.

5. A model or a physical assist, paired with the verbal and gestural cue, may be necessary to elicit a student's response.

6. Some students are tactally defensive making physical assistance difficult. It is important to persist slowly but firmly to breakdown these defenses.

7. Students may exhibit "odd" movement patterns. Use your judgement in trying to modify these patterns. Correction may take more time than the effort is worth.

8. Give directions in a low, firm voice so that they know you mean business. Do not yell or shout, which may serve to escalate a child's behavior.

9. Above all, be flexible! If you planned a 5 minute activity and it takes 10, that is fine as long as everyone is busy and occupied. On the other hand, if students loose interest after 2 minutes, you may want to substitute another activity.
LANGUAGE AND GIVING DIRECTIONS

1. Give short precise directions. If you want the student to hold onto the white section of a parachute, say "hold white". Do not overload the student with a lot of verbage.

2. Pronouns cause autistic youngsters confusion. Rather than saying, "It's your turn", say "It's Bobby's turn". Bobby does not know anyone named "your".

3. Many autistic youngsters, due to latent language development, have been trained to sign language as well as verbal directions. When possible give both the signed cue and the verbal direction.

4. As autistic youngsters have problems processing verbal language/directions, allow the student 5-7 seconds to respond to the initial direction before repeating the command. If after 7 seconds the student still does not comply, simplify the direction, wait for a response; and if the student still does not comply, assist him/her physically.

5. If your intention is to give a command and the student has no choice as to his/her involvement in a given activity, make the command a statement not a question. Do not ask if there is no option. Merely state the direction: "It's time to run".

6. Many verbal autistic youngsters are echolalic, they mimic verbatim what they have heard generally without comprehension. Thus, when giving a direction, give the verbal cue and signed cue, and model the action. Then ask the student "What was the direction?" After the student verbally repeats the direction, check to see if they understood the command by saying "Show me".
7. Verbal autistic students tend to answer questions with rote responses rather than understanding of the question. Because they generally have good memories, they memorize a number of frequently used responses. Many times these responses are arbitrarily appropriate. To make sure that the student actually understands the question, rephrase the question or probe further on the subject.

8. Autistic youngsters have great difficulty both understanding language and expressing themselves verbally. Thus, it is important to reinforce language attempts and to feed in language responses. Help the student by verbalizing what he/she is doing or what piece of equipment is being used. This helps students generalize their understanding and use of words to other settings.
CHANGING OR STOPPING ACTIVITIES

Autistic youngsters have great difficulty handling change and transition. Many times, behavioral outbursts occur because of a change in activity or routine. To assist these students in dealing with change or moving from one activity to the next, develop a signal which helps to cue the student that a change is going to occur. This helps the student understand what is to happen next, and alleviates anxiety or tantrums. Following are some examples which help autistic youngsters make transitions.

1. Have students work on given pieces of equipment until a timer goes off. The bell then becomes the signal that it is time to change activities.

2. Because autistic youngsters have difficulty with time concepts, use specific references for time. Terms such as later, tomorrow, or yesterday are abstract, indefinite concepts which have little meaning to autistic youngsters. Telling the student that he/she may play ball after exercises is a more helpful way of relaying time concepts.

3. As autistic youngsters have difficulty sequencing and organizing, these things must be done for them. Establish a routine so the student more clearly knows what is expected: sit on carpets, run laps, do exercises, play a game.
CHANGING OR STOPPING ACTIVITIES (Continued)

4. Specific activities within the routine should be varied, to build in some flexibility. For instance, if exercises consist of sit-ups, rock-and-rolls, push-ups, and leg lifts, change the order in which these activities are done.

5. Make sure to leave enough time at the end of class to prepare students for the transition back to the room. Tell students that it is time to stop. Have them help put equipment away, and then line up at the door. Again, this sequence helps signal to them that one activity is ending and it is time for the next one to begin.
STRUCTURING THE ENVIRONMENT

Be aware of the students' responses to the size and acoustics of the gym. Many have difficulty coping with the large room, the lighting, or the echoes, and may perseverate on any of these elements. To minimize these distractions:

1. Meet the students at the gym door and direct them to sit down in a designated area.

2. Give students concrete reference points of position. "The yellow line," may be too abstract a concept. Place carpet squares, poly spots, or hoops on the line to give them an exact reference point. (In our experience, poly spots are the superior choice. Poly spots, once the student is seated, are out of sight and thus demand no further attention. Students tend to pick lint or the foam backing off carpet squares or become preoccupied with the fraying edges. Hula hoops are great noise makers and, thus, big temptations.)

3. Position yourself against the wall with students facing you to lessen visual distractions.

4. Keep the lights low if possible, or if natural lighting is available (windows) use that rather than buzzing fluorescents.

5. Keep your voice low, speaking to students calmly and in close proximity to them. Do not use your whistle or yell from across the gym.

6. Keep extra equipment out of sight until it is to be used.
MANAGING SPECIFIC BEHAVIORS

Many autistic youngsters exhibit a variety of maladaptive behaviors. These may take the form of odd motor ticks, perseverative speech patterns, self-stimulation (flapping, rocking, jumping, flicking), self injurious behavior, or aggressive acts. Behaviors should be constantly monitored and modified. Behaviors can be changed with a variety of techniques: redirection, response-cost, extinction, or time-out. Consult with the classroom teacher as to techniques used for behavior management with each student. A few general management techniques are listed below.

1. Do not use "NO". Instead, use the positive redirection. For example, rather than "No hands in mouth", cue the student to "hands down", or "hands back". This direction may be used by all persons involved with training the student and does not give attention to the negative behavior. Positively reinforce the student's compliance with the direction: "Nice hands down" which again gives attention to the appropriate rather than the inappropriate behavior.

2. Perseverative behaviors, repetitive, non-functional actions of students which tend to draw them into themselves, must be discouraged. Keeping students actively engaged in developmentally appropriate and functional activities, greatly minimizes perseveration.

3. Another very useful behavioral tool is the use of incompatible activities. It is difficult to "jump and flap" if the student is on roller skates or cross country skis. It is impossible for the student to masturbate in class if their hands are busy crawling, doing a wheelbarrow, or catching a ball.

4. Train appropriate uses of equipment to decrease stereotypic, repetitive responses to objects; i.e., spinning the wheels of a scooter. Teach the student the appropriate use and function of the equipment; i.e., riding the scooter. If high interest activities are used, students will be more likely to engage in these than perseverate on the equipment.
5. Maladaptive behaviors may also be normalized. If students do like to jump, but proceed to jump all over the place, a good outlet may be a jogging tramp or pogo stick. This not only makes their jumping behavior look more normal, but also provides cardio-respiratory stimulation and appears to be a good outlet for the energy.

6. Reinforce correct and appropriate behaviors, immediately and specifically; i.e. "Good skating", "Nice following directions" rather than "Good" or "Good work". Accordingly, inappropriate behaviors or responses need to be corrected immediately. The appropriate behavior or response needs to be given to the student and the student needs to practice the correct response at once.

7. Try to select activities whose outcome is in itself reinforcing to the student; i.e., lots of reaction for a little action on the student's part:
   If students like to jump, they may continue to practice jumping if they are jumping on an inner tube or tramp.

   Throwing and catching may be more easily taught using a bounce-back net. The student throws, and the beanbag comes back to them providing another practice opportunity and reinforcing the throw and catch elements of the activity

   Students, walking backwards pulling a friend on a scooter, will understand the importance of looking over their shoulders more readily if they bump into a wall than if you merely tell them to look where they are going.

In short, use natural reinforcers and consequences to facilitate your teaching and the students' learning.
SOCIAL INTERACTIONS

Autistic youngsters have great difficulty understanding social situations, socially appropriate behavior, or social interactions. Thus, many times their behaviors are odd, or at times embarrassing. It is important to use these opportunities to train appropriate behaviors and social skills.

1. Some autistic students do not have a grasp of the concept personal space. Thus, they may stand too close to you or get too close to your face. Simply tell the student, "Dennis is too close" and move him away a step. Use an arm's length as a guideline.

2. Positively reinforce any appropriate social interaction as you see it occur: "I like the way Aaron and Patty are sharing the ___."

3. Structure activities to encourage social interactions. Use of peer tutors is a good way to provide appropriate models. Make sure that the peer tutors are inserviced so that they do not give too much help and allow time for the autistic youngster to respond. Plan partner activities whenever possible (e.g. bounce and catch with a peer, see-saw sit-ups with a helper, pull a friend on a scooter, etc.).

4. Teach interaction skills and turn taking (e.g. use circle games which require the student to name the person to whom they will throw).
GENERALIZATION

Generalization is the occurrence of a desired behavior under different or untrained conditions. Autistic youngsters generally do not use learned responses in new or different settings without additional training. They need to learn by actually doing and experiencing. Unless generalization techniques are incorporated in lesson planning, you are merely training a sequence of rote responses to particular situations. Following are some methods for facilitating generalization and thus strengthening the learned responses.

1. Vary the equipment used. Use different colored and different sized balls. Show the child that the different looking objects all have the same function.

2. Move equipment or stations to different areas of the gym, making sure that the student knows how to perform activities in different settings.

3. Train activities in a variety of settings: gym, classroom, playground, or park.

4. Change the order of your presentation of exercises to insure that the students know each activity, rather than a rote sequence.

5. Make sure that the students interact with a variety of trainers and peers. This serves to increase the likelihood of a generalized response.

6. Give students the opportunity to do as much of the task or activity as independently as possible. Initially, progress from least intrusive to more intrusive cues (verbal, model, physical prompt, physical assist) until the desired response is obtained. Fade the number of prompts given.

7. Incorporate problem solving and sequencing tasks by encouraging students to tell you what equipment is needed for a given activity or which activity comes next.
IV DEVELOPMENTAL EXERCISES

AND WARM-UP ACTIVITIES
RATIONALE: Autistic youngsters often do not execute "traditional" exercises or calisthenics correctly or rapidly enough to derive any benefit. Exercises should be taught in a developmental sequence beginning with simple, individual exercises. The selection of exercises or activities must be carefully planned with attention to the purpose of the training. A developmental sequence of exercises and activities emphasizing balance, strength, coordination, and joint stability seems more appropriate than regimented calisthenics in meeting these needs. As the child progresses greater degrees of independence can be achieved culminating in a program where students are called upon to select and lead warm-up exercises.
### DEVELOPMENTAL EXERCISES AND WARM-UP ACTIVITIES

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<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Leg Lifts</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Donkey Kicks</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td><strong>CRAB POSITION</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridges</td>
<td>X</td>
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<td>Crab Position</td>
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<td></td>
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<tr>
<td>Heel Sit to Kneel</td>
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*Activity elaboration appears on the following pages*
Developmental Exercises and Warm-up Activities (Continued)

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<td>7-9 10-12</td>
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<td>ARMY CRAWL*</td>
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</tr>
<tr>
<td>Prone Drag</td>
<td>X</td>
<td>X</td>
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</tr>
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<td>Army Crawl</td>
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<td>X</td>
<td>X</td>
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<td>CRAB WALK*</td>
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<td></td>
<td></td>
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<tr>
<td>Butt Scoot</td>
<td>X</td>
<td></td>
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</tr>
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<td>X</td>
<td>X</td>
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<td>KNEE WALK*</td>
<td>X</td>
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<tr>
<td>WHEELBARROW*</td>
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<tr>
<td>Over Balster</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Wheelbarrow</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>WHEELBARROW PUSH-UPS*</td>
<td></td>
<td></td>
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<td>FORWARD ROLL*</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>BACKWARD ROLL*</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>TOE TOUCHES (Standing and Sitting)</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>SIDE STRETCHES (Standing and Sitting)</td>
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<tr>
<td>TORSO TWISTS</td>
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<td>X</td>
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<tr>
<td>ARM CIRCLES</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>WINDMILL</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>WALL HANG*</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>LEG LIFTS</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>RUN/JOG</td>
<td>X</td>
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*Activity elaboration appears on the following pages.
### Developmental Exercises and Warm-up Activities (Continued)

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<th>ACTIVITY</th>
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<th>VERBAL CUE</th>
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<tbody>
<tr>
<td>MAT ACTIVITIES</td>
<td></td>
<td>&quot;Lie down on mat; on blue&quot;</td>
</tr>
<tr>
<td>in general</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| SIT-UPS          | 1. Rock-n-Roll    | "Hold knees; Rock-n-Roll"       |
| Bent Knee        | 2. Assisted Sit-ups: |
|                  | with trainer       | "Up 1, Up 2, Up 3, etc."       |
|                  | with peer tutor    |                                 |
|                  | with classmate     |                                 |
|                  | 3. See-Saw Sit-ups| "Legs out; lie down; Sit-up"    |
|                  | with trainer       |                                 |
|                  | with peer tutor    |                                 |
|                  | with classmate     |                                 |
|                  | 4. Independent Sit-up with feet held and arms crossed on chest | Trainer, peer tutor, or classmate count* with autistic student |

*Note: Observe whether the autistic student counts with one-to-one correspondence

<p>| PUSH-UPS         | 1. Cobra           | &quot;Head Up; Down&quot;                 |
|                  | 2. Bolster Push-Up | &quot;Down; Up&quot;                      |
|                  | 3. Push Up from knees | &quot;Down; Up&quot;                |
|                  | 4. Push up from feet | &quot;Down; Up&quot;               |</p>
<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>SKILL PROGRESSION</th>
<th>VERBAL CUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL 4's</td>
<td>1. Lift Arms L/R</td>
<td>&quot;Wave; Other Hand&quot;</td>
</tr>
<tr>
<td></td>
<td>2. Lift Legs L/R</td>
<td>&quot;Kick; Other Leg&quot;</td>
</tr>
<tr>
<td></td>
<td>3. Donkey Kicks alternating legs</td>
<td>&quot;Count to ____&quot;</td>
</tr>
<tr>
<td>CRAB POSITION</td>
<td>1. Bridge</td>
<td>&quot;Bottom up&quot;; Have student hold position for a # of counts</td>
</tr>
<tr>
<td></td>
<td>2. Crab position</td>
<td></td>
</tr>
<tr>
<td>KNEE STAND</td>
<td>1. Heel Sit to Kneel</td>
<td>&quot;Up, Down&quot;</td>
</tr>
<tr>
<td>LOW LEVEL LOCO-MOTOR MOVEMENTS</td>
<td></td>
<td>&quot;Line up by wedge&quot;</td>
</tr>
<tr>
<td>LOGROLL L/R</td>
<td>1. Down Wedge</td>
<td>&quot;Lie Down&quot;</td>
</tr>
<tr>
<td></td>
<td>2. Along Mat</td>
<td>&quot;Arms up, Roll&quot;</td>
</tr>
<tr>
<td></td>
<td>3. Up Wedge</td>
<td></td>
</tr>
<tr>
<td>ARMY CRAWL</td>
<td>1. Prone Drag (arms only)</td>
<td>&quot;Pull&quot;</td>
</tr>
<tr>
<td></td>
<td>down wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Army Crawl (arms and legs): &quot;On Tummy&quot;</td>
<td>&quot;Army crawl&quot;</td>
</tr>
<tr>
<td></td>
<td>down wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>along wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>up wedge</td>
<td></td>
</tr>
<tr>
<td>ACTIVITY</td>
<td>SKILL PROGRESSION</td>
<td>VERBAL CUE</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>CREEP</td>
<td>1. Down wedge</td>
<td>&quot;Hands and Knees; Crawl&quot;</td>
</tr>
<tr>
<td></td>
<td>2. Along mat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Up wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Backward</td>
<td></td>
</tr>
<tr>
<td>CRAB WALK</td>
<td>1. Butt scoot backward</td>
<td>&quot;Scoot&quot; for forward</td>
</tr>
<tr>
<td></td>
<td>2. down wedge</td>
<td>&quot;Push&quot; for backward</td>
</tr>
<tr>
<td></td>
<td>3. along wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. up wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Crab walk forward and backward</td>
<td>&quot;Bottom up&quot; &quot;Crab walk&quot;</td>
</tr>
<tr>
<td></td>
<td>6. down wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. along wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. up wedge</td>
<td></td>
</tr>
<tr>
<td>KNEE WALK</td>
<td>1. Knee walk on mat</td>
<td>&quot;On knees; knee walk&quot;</td>
</tr>
<tr>
<td></td>
<td>2. up wedge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. down wedge</td>
<td></td>
</tr>
<tr>
<td>WHEELBARROW</td>
<td>1. Over bolster forward and backward hand walking</td>
<td>&quot;Walk on Hands&quot;</td>
</tr>
<tr>
<td></td>
<td>2. Down mat assisted by trainer holding above knees</td>
<td>&quot;Wheelbarrow&quot;</td>
</tr>
<tr>
<td></td>
<td>3. Assisted by peer tutor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Assisted by classmate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Students change roles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Wheelbarrow forward and backward</td>
<td></td>
</tr>
<tr>
<td>ACTIVITY</td>
<td>SKILL PROGRESSION</td>
<td>VERBAL CUE</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------------------------</td>
<td>----------------------------</td>
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</tbody>
</table>
| WHEELBARROW PUSH-UPS| 1. Student wheelbarrows to  
|                     | a series of masking tape                             | "Wheelbarrow; Get tape"     |
|                     | 2. loops and does a push-up,                          |                            |
|                     | 3. picking up the tape with                            |                            |
|                     | 4. his/her teeth                                        |                            |
| FORWARD ROLL        | 1. Down wedge                                          | "Hands down, head down, push"|
|                     | 2. On mat                                               |                            |
| BACKWARD ROLL       | 1. Down wedge                                          | "Sit; roll"                 |
|                     | 2. On mat                                               | "Squat; roll"               |
V  FITNESS COORDINATION AND

BALANCE ACTIVITIES
## FITNESS, COORDINATION, AND BALANCE ACTIVITIES

<table>
<thead>
<tr>
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<td><strong>EXERCISE BIKE</strong></td>
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<tr>
<td><strong>JOGGING TRAMP</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Jump</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Jog</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Jog for time</td>
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<td>X</td>
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</tr>
<tr>
<td><strong>POGO STICK</strong></td>
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<td>X</td>
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<tr>
<td><strong>CLIMBING LADDER/STEP LADDER</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Climb up</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Climb down</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Step over</td>
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<tr>
<td><strong>HORIZONTAL LADDER</strong></td>
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</tr>
<tr>
<td>Hang and drop</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cross hand to hand</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cross hand over hand</td>
<td></td>
<td>X</td>
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</tr>
<tr>
<td><strong>CHINNING BAR</strong></td>
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<td></td>
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</tr>
<tr>
<td>Hang from knees</td>
<td></td>
<td>X</td>
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<tr>
<td>Pull up/Chin up</td>
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<tr>
<td><strong>RESISTANCE ACTIVITIES</strong>*</td>
<td></td>
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</tr>
<tr>
<td>Chinese jump rope</td>
<td></td>
<td>X</td>
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</tr>
<tr>
<td>Bicycle innertubes or</td>
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<td>X</td>
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</tr>
<tr>
<td>Surgical tubing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stilts</td>
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<td>X</td>
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<td>Balance Puzzles*</td>
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*Activity elaboration appears on the following pages.
Fitness, Coordination, and Balance Activities (Continued)

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<td>JUMP ROPE*</td>
<td></td>
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</tr>
<tr>
<td>Long</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Short</td>
<td>X X</td>
<td>X X</td>
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<td>VESTIBULAR BOARD</td>
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<tr>
<td>All 4's dynamic balance</td>
<td>X</td>
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<tr>
<td>Standing Balance-Straddle</td>
<td>X X</td>
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<td>Standing Balance-Lunge</td>
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<tr>
<td>Partner Balance-Straddle</td>
<td>X X</td>
<td>X X</td>
</tr>
<tr>
<td>Partner Balance-Up and Down</td>
<td>X X</td>
<td>X X</td>
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<tr>
<td>INNER TUBE BOUNCE</td>
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<td></td>
</tr>
<tr>
<td>Individual Bounce</td>
<td>X X</td>
<td></td>
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<tr>
<td>Partner Bounce</td>
<td>X X</td>
<td>X</td>
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<td>BALANCE BEAM: LOW AND STANDARD</td>
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</tr>
<tr>
<td>Sidestep L/R</td>
<td>X X</td>
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<tr>
<td>Reciprocal Step Forward</td>
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</tr>
<tr>
<td>Reciprocal Step Backward</td>
<td>X X</td>
<td>X X</td>
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</table>

*Activity elaboration appears on following pages.
RESISTANCE ACTIVITIES

1. Curls: Student stands on the inner tube, grasps one end of the inner tube with palm up and straightens the arm. Lift up the lower arm at the elbow.

2. Pull ups: Student stands on inner tube as in #1, holds the inner tube with an overhand grip, and brings the inner tube to the chest.

3. Two students stand back-to-back in an inner tube and try to run against the resistance of the tube.

4. One student stands in the inner tube holding it at waist level. Another student or instructor holds the tube as the first student tries to run against the resistance.

5. Leg lifts: Lying on your back with one knee bent, student places one end of the inner tube around the other foot and holds the other end. Student performs straight-leg-lifts and then changes legs.

6. While sitting, the student holds one end of the inner tube and loops the other end around both feet. Knees are bent to the chest and straightened as student maintains balance in a V-sit position.
Resistance Activities (Continued)

7. Using an inner tube strip (a single length of inner tube approximately 24" long with a knot two inches from each end), student grasps the knots at chest height and pulls out.

8. With the inner tube strip behind the head, student pulls outward.

9. Keeping the left arm straight out to the left and the right arm bent to the left (like an archer), student pulls the inner tube strip with the right arm. Student reverses position and repeats the movement.

10. Students stand side by side holding each others shoulder. With a piece of surgical tubing around the ankles, each student lifts the outside leg.

11. Military Press: Standing on a large inner tube with legs shoulder width apart, and holding the tube at shoulder level with palms up, the student extends arms overhead.

NOTE: Used bicycle inner tubes can easily be obtained from bicycle repair shops. Phone and ask them to save the used inner tubes, and usually they will gladly oblige, charging you nothing for the inner tubes. Wash the inner tubes and cut the valves out for safety considerations. Surgical tubing can also be used for these activities.

Fitness, Coordination, and Balance Activities (Continued)

BALANCE PUZZLES

Construction:
The following balance puzzles can be made by cutting body part patterns according to the diagram and gluing them on construction paper. Use 11" x 14" construction paper to mount the various puzzles, and then laminate them to increase durability. Cut all LEFT parts out of black construction paper and all RIGHT parts out of white construction paper.
BALANCE PUZZLES (Continued)

* Activities are listed in the Partner and Small Group Games and Activities section

JUMP ROPE

1. Let students practice the prerequisite skill of vertical jumping.
   A. Jump on an inner tube or trampoline to experience the "flight".
   B. Jump up and touch a suspended balloon.
   C. Have students crouch and then "pop-up" and jump into the air.

2. Begin teaching long jump rope which is an easier skill than individual rope jumping.
   A. Teacher or associate should turn the rope initially.
   B. Place a masking tape X on the floor.
   C. Tie a knot in the center of the long jump rope.
   D. Have the student stand next to the knot facing the instructor.
   E. Ask student to practice jumping up and down on the X a few times. This helps students get the idea of jumping up, rather than over.
   F. Verbally cue the student to "jump" as you turn the rope over the student's head and hopefully under their feet.
   G. Adjust rope turning speed to the student's tempo. Initially students will use a single bounce jump. This improves with skill development.

3. Short jump ropes: This is a difficult skill requiring lots of coordination and, therefore, lots of practice. Put on some snappy music that the students selected or brought in.
   A. Encourage the students to practice the rope jumping sequence step-by-step.
      1. Student holds an end of the rope in each hand and stands in front of the rope.
      2. The student swings the rope overhead and stops it in front of their toes on the floor.
      3. Student jumps over the rope - emphasize vertical jumping rather than jumping too far "over" the rope.
      4. Repeat the steps.
   B. Allow students to bring in music to jump rope by and encourage them to continue jumping for an entire song.
   C. Some students may benefit from standing in front of the instructor and jumping when the instructor turns the rope overhead.

Circuit Training

1. Select a number of activities that the students have learned in warm-up routines.

2. Place photos of students engaged in the activity around the gym. The actual photo is better than a stick figure representation. The printed words may also be placed next to the photo.

3. Have students work at a station until a predetermined signal is given. This may be a break in background music or the bell from a timer. This lets the student know that it is time to change activities and facilitates transition.

4. Sample circuit training stations:
   - Sit-ups
   - Jogging tramp
   - Exercycle
   - Resistance activity with bicycle inner tubes
   - Wall sit
   - Jump rope
   - Wall push-ups

Select a small number of stations during initial training.
TEACHING SUGGESTIONS

1. Have students work at a station or on a given piece of equipment until a timer goes off. This signifies the end of the activity and facilitates transition to the next activity.

2. Obstacle courses are good for motor planning and reinforcing space concepts and the accompanying language (i.e. under, over, around, through). When using an obstacle course, keep it simple and uncluttered otherwise the barriers and not the pathway become the focus of attention.

3. Resistance activities for younger students can be done with a chinese jump rope, having students holding the rope in a circle formation and performing a variety of exercises and locomotor skills. This greatly facilitates group participation and control.

4. Set-up partner activities (especially in the balance area) that require students not only to react to the dynamics of the equipment, but also to interact with a classmate and his or her responses.

5. Changing spatial orientations, primarily inverted postures, may be extremely frightening at the beginning of training. The screams will eventually give way to skill acquisition and a better ability to deal with the environment.
6. Autistic youngsters tend to be either extremely capable and daring climbers or balance beam walkers, or tend to be terrified of having their feet off of the ground. Caution should be used with the "daredevils" as judgement and fear are unknown entities to them, thus they can get into dangerous situations without realizing the consequences of their actions. Make sure to train all aspects of the activity (i.e. climbing up and climbing down). Students afraid of climbing or balance beam activities require step by step assistance and reinforcement to overcome their fear of the unknown.
VI  PLAY  SKILLS
TITLE: PLAY SKILLS

RATIONALE: Autistic children do not play spontaneously, and the play that they do exhibit tends to be stereotyped and repetitious. They may imitate play routines that they have seen on television or copy the play of siblings or peers, but they fail to modify this play unless directed to do so. "Since autistic children have little capacity for creative play, it is especially useful to encourage physical activities which are enjoyable without the need for imagination" (Wing, 1972, p. 100). Autistic children are also considered to be antisocial. If left to his or her own devices, the student prefers to self-stimulate or perseverate rather than appropriately interact with peers or equipment. In light of these pervasive deficits, it is important to provide the autistic child with meaningful play experiences. In planning and selecting play activities: 1) encourage functional use of equipment; 2) present age appropriate activities; and 3) structure peer interaction in 1:1 or small group activities.
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<thead>
<tr>
<th>PLAY SKILLS</th>
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*Teaching suggestions appear on the following pages.
Play Skills (Continued)

<table>
<thead>
<tr>
<th>Skills*</th>
<th>ELEMENTARY</th>
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<tr>
<td><strong>BALL SKILLS</strong></td>
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<tr>
<td>BOUNCE AND CATCH TO SELF</td>
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<tr>
<td>In tires with playground ball</td>
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<td>X</td>
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<tr>
<td>In tires with basketball</td>
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<td>X</td>
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<tr>
<td>Around cones with playground ball</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Around cones with basketball</td>
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<td>BOUNCE AND CATCH TO PARTNER</td>
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<td>Tennis balls to bowling pins</td>
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<tr>
<td>Tennis balls into boxes</td>
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<td>DRIBBLE BALL WITH HANDS</td>
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<td>Playground ball</td>
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<td>Basketball</td>
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* Teaching suggestions appear on the following pages.
### Play Skills (Continued)

<table>
<thead>
<tr>
<th>Ball Skills (Continued)</th>
<th>Elementary</th>
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<tr>
<td>Grades: 1-3 4-6 7-9 10-12</td>
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#### Kick Ball

- Kick suspended ball
- Kick to partner
- Kick into box
- Kick into net
- Dribble around cones
- Kick cage ball-seated
  - on scooter
  - standing

#### Batting (Balloons, punchballs)

- To partner
- To Self
- In circle
- Over net

#### Volleyball

- Punchball Volleyball
- Beachball Volleyball
- Moonball with Cageball

#### Catch

- Playground ball
- Nerf football
- Football
- Softball
- Medicine ball
Play Skills (Continued)

<table>
<thead>
<tr>
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BALL SKILLS (Continued)

BOUNCEBACK NET*

- Beanbags          X     X
- Tennis balls      X     X     X

STRIKING

- Hit suspended ball with large bat X
- Hit pitched ball with large bat  X     X
- Bounce or fly with whiffle ball bat X     X
- Bounce or fly with bat and softball X     X

PING PONG*

- Hit suspended ball with paddle    X     X
- Punchball Ping Pong               X     X
- Ping Pong                        X

* Teaching suggestions appear on the following pages.
TEACHING SUGGESTIONS

Aerobie

We have found that students have much greater success at both throwing and catching an aerobie than a standard frisbee. The aerobie is much more forgiving in flight and much easier for students to catch.

Ball Skills

1. Students can be taught to "roll ball" very readily if they are seated on the high end of a wedge or incline. The trainer then can roll the ball to the student, who with no effort, successfully completes the task of rolling the ball back to the trainer.

2. For the overly mobile student, begin teaching him/her ball skills in a seated position. Students may be seated on chairs, straddling bolsters, or sitting on T-stools.

3. Highly distractible students should practice skills facing a wall, thus giving them a more limited view of the gym and increasing the likelihood of attending to the task.

4. Cue students to their "personal space" by asking them to stand in hoops or on carpet squares.

5. Use a hand-over-hand assist from behind when beginning training on ball skills. Verbally cue the student on each trail:
   "Bounce Ball" and assist
   "Catch Ball" and assist
6. A bounced ball is easier to catch than a thrown ball. The student has a better chance of tracking a bounced ball because it moves more slowly and the sound of the bounce helps the student attend to the ball rather than the trainer.

7. Punch balls, because they are light and move slowly, are excellent for teaching beginning ball skills and games. Ping pong, hackey sack, and volleyball can all be played rather readily by students when punch balls are substituted for the traditional equipment.

8. To teach a two-handed underhand toss, use a medicine ball. The size and weight of the ball makes it virtually impossible for the student to throw it any other way.

9. To keep students' interest in practicing ball skills try to use high interest or high reaction targets or activities:
   - Throw beanbags to an inflatable punching bag
   - Throw beanbags to an inner tube and try to get them to rebound
   - Use a rebound net
   - Throw at targets with auditory reinforcement, i.e. bells, squeak toys, beads in hoops

10. For beginning striking skills using either the hand or an implement, start training using suspended balls. This significantly increases practice time and success in the early stages of learning. Peer interaction can also be developed using suspended balls. This proves successful even when students have differing skill levels.

11. It is often difficult to get autistic children to attend to any ball. When beginning to train object interaction with balls, try using whiffle balls, which seem very appealing because of the holes. Bells may be pushed into balls to auditorily stimulate the student.

12. Hard balls: playground balls, whiffle balls, basketballs seem to be better than nerf balls as they can be readily washed or disinfected and cannot be picked apart.

13. Call the student's name and give the verbal cue before bouncing or throwing a ball to them. "John, catch ball." Many students seem to have uncanny peripheral vision, so do not be concerned with eye contact.

Bounce Back Net

1. Begin the activity using beanbags, as they do not roll away and thus decrease "chasing time".

2. Place a box or crate approximately where the beanbag will land (check out the student's throw and the subsequent trajectory of the beanbag) and many of them will land in the crate.

3. Students seem to like this activity as there is high reaction of the rebounding beanbags or balls.

4. To increase the loft of the projectile and slow down the speed of the rebounding object, elevate the bottom of the bounce back net on a box.
Teaching Suggestions (Continued)

Ping Pong

1. Use punch balls on a regulation table with standard ping pong paddles. This significantly slows down the activity, but allows the student to use standard ping pong techniques. You will be amazed at the students' success.

2. If the ball is hit off of the table, have the student "look" for the ball. Many still have not mastered the cognitive skill of visible displacements, thinking that if they can not see the ball it is gone.

3. If students have a difficult time keeping the punchball on the table, push two tables together to increase the playing area.

4. Another technique particularly helpful in keeping the ball on the table is that of attaching the punchball to the net. Tie a string, half the length of the table, to the center of the net. This causes minimal interference and maximizes table play.
VII  PARTNER AND SMALL GROUP GAMES AND ACTIVITIES
PARTNER - COOPERATIVE TASKS

In helping autistic students to develop social and play skills, attention must be given to planning interactions. Cooperative, partner activities should be infused throughout the physical education class. Following are a few activities which either require or lend themselves nicely to cooperation.

1. Pull a friend on a scooter. Students may be pulled with a hoop or a rope tied to a deck tennis ring. Students should then change roles.

2. Lawn mower: One student lies on the scooter on his/her tummy, while the partner stands behind holding feet. The student holding the feet is instructed to "push", while the student on the scooter clasps hands holding "arms out" or "arms back".

P.S. They really like the "lawn mower" sound!

3. Back-to-Back Ball Pass: Two students stand back-to-back and pass around their bodies reaching to the side to receive the pass.

4. Assign partners for exercises. Partners may do see-saw sit-ups. Students straddle sit facing each other and hold hands; alternating lying down.
5. If regular sit-ups are done, have one student "hold feet" and "count". If verbal students are counting, check to make sure they are demonstrating 1:1 correspondence.

6. Using hoops, bicycle tires, or bicycle inner tubes, have pairs of students stand, holding the hoops at waist level and move around the gym. Students may walk forward, backward, sideways, or jog around the gym.

7. Ask students to help put the equipment away. Larger pieces like mats, wedges, or balance beams require two students to cooperate to accomplish the task.

8. Have skilled student "help" lesser skilled student. This could be holding his hand on a low balance beam, jumping with him on a tramp, tying shoes, assisting with equipment, or any variety of activities. Be sure to keep safety in mind when allowing student helpers.

9. Body part identification activities lend themselves nicely to partner work. Students may place bean bags on head, shoulder, back, etc...of their partner. Back-to-back is another task requiring interaction. A body part is named and students are asked to touch the body part named to the same body part of their partner; i.e. back-to-back, head-to-head, etc...

10. Lead-up bowling activities also require students to attend to the sequence of the activity and assume different roles. Pin bowling with a partner could be set-up in the following fashion:

```
PIN-SETTER STANDS ON MAT

\[\text{**X**} \quad \text{**X**} \quad \text{BOWLER}\]
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One student bowls, the pin setter returns the ball for the bowler's second ball; then the pin setter resets the pins and moves to the bowling position.
SMALL GROUP GAMES

Autistic students have a great deal of difficulty playing games and understanding the "game concepts" of winning, team wins, being a team member, and beating the clock. If autistic youngsters do understand "winning," they tend to perseverate on that concept: "Did I win?" "Am I best?" and are generally very upset if they do not win. As these competitive aspects of game playing are difficult, autistic youngsters need to be taught games in a step-by-step fashion. Lower levels of play: parallel play, associative play, and cooperative play need to be encouraged. Basic concepts of game playing that need to be taught and reinforced include: taking turns, working with a partner to accomplish a common goal, and enjoyment of the activity. Although these are difficult concepts to teach children, they are extremely important in the development of play skills and social interaction.

The following games are presented in an effort to facilitate the teaching of play skills. These are activities which have been highly successful and enjoyable for autistic students. The games may be taught in any gym or open area. Although a class size of 4 - 8 students is assumed, many of the activities are readily adaptable to larger classes. The level of play required in each game is included to facilitate the teacher's planning. Efforts should be made to progress from activities requiring parallel play, to associative play, to cooperative play, and finally to some competition. Equipment necessary for each activity, along with a description and organizational plan are also presented. Examples of step-by-step verbal cues helpful to the students is also included as a general guideline in the teaching sequence section. Additional tips or hints are provided under teaching suggestions.

Autistic youngsters require a great deal of practice playing games before they grasp the pattern of movement or the objective of the game. Do not be discouraged if the first few run-throughs of an activity seem to be futile. Persevere. The rewards for the student and the teacher are well worth the time and effort.
BALANCING ON PARTS

GOAL: Balance, body awareness

LEVEL OF PLAY: Parallel

EQUIPMENT: None

DESCRIPTION: Initially each child will be instructed to attempt to balance on specific body parts (e.g. balance on 1 foot). Then they will be encouraged to explore balancing on 1 body part, then 2, 3, 4, and 5.

ORGANIZATION: Spread children out so that they will not interfere with each other. Initially give instructions, but eventually allow them to experiment and be creative.

TEACHING SEQUENCE: Example - Balance on 1 body part - bottom
1. "Sit down."
2. "Feet up."
3. "Hands up."
4. "Good, you're balancing on your bottom."
5. "Good, you're balancing on 1 body part."
6. "What body part is on the floor?"
7. "Right, your bottom is on the floor."
8. "Can you balance on 2 body parts?"

TEACHING SUGGESTIONS:
1. Initially students will simply model your position. They may need to be in exactly the same position you are in to accomplish the task (i.e., sitting next to you, using the same foot or hand, etc...). It is important to feed in the language and the concept of which part and how many are on the floor.

2. Begin with simple poses.

3. Make sure you show students that there is more than one solution to each balance problem: i.e., balance on 4 body parts - 2 hands and 2 feet can be done different ways.

SOURCE: Adapted from Savel & Leme, 1985
BALLOON BLOOPS

GOAL: Coordination, tracking

LEVEL OF PLAY: Parallel

EQUIPMENT: Balloons or punch balls and hoops or bicycle tires

DESCRIPTION: Each student will have a balloon or punch ball. The object of the game is to contact the balloon or punch ball to keep it in the air.

ORGANIZATION: Initially, each student will remain in his/her own area as defined by their hoop.

TEACHING SEQUENCE:
1. "Stand in hoop"
2. "Hit up"
3. "Look at ball"
4. "Hit up"
5. If the ball drops to the floor, have the student "Get ball".
6. "Go to hoop"
7. "Hit up"

TEACHING SUGGESTIONS:
1. If control of the punch ball and subsequent student movement becomes a problem, ask students to kneel in their hoop.
2. To facilitate control students may also be placed facing a wall or corner. This will help minimize distractions.
3. For students having very poor ball skills, try suspending a punch ball on a lightweight string from a basketball net. This will keep the ball in one area and allow the student more practice time and success.
4. Equipment-wise, punch balls are superior to balloons.
5. This activity may be used as a lead-up to hitting punch balls with paddles or racquets or hitting to a partner across a net.

STATIONARY BEAN-BAG BALANCE

GOAL: Balance, awareness of individual body parts, coordination

LEVEL OF PLAY: Parallel

EQUIPMENT: Bean-bags

DESCRIPTION: Each student is given 1 bean-bag. The instructor will name a part of the body and each student will attempt to balance their bean-bag on that body part. If successful, students will try another stunt (e.g., balancing on one foot with bean-bag on right hand).

ORGANIZATION: Children will be scattered into spaces on the floor. Mark tape X's on the floor to designate an open space.

TEACHING SEQUENCE:
1. "Beanbag on (body part)"
2. Wait at least 7 seconds before modeling the beanbag placement.
3. Repeat

TEACHING SUGGESTIONS:
1. Begin with students sitting to maintain attention.
2. Once students are fairly consistent in placing beanbags on body parts, vary the directions:
   Place "on other knee", "under chin", "under bottom", "on tummy" (under shirt)
3. Vary balance positions - i.e., standing, balance beanbag on knee; kneeling, balance beanbag on shoulder, etc....

4. Use clothespins and ask students to clip them on clothes on body parts. Have them clip 2 or 3 on and then ask them to remove the clothes pins.
   "Clip on shoelace"
   "Clip on hair"
   "Clip on shoulder"
   "Take off hair"
   "Take off shoe"
   "Take off shoulder"
5. Ask students to name parts and lead the activity.
6. Ask students to balance beanbags while moving; i.e.
   "Creep with beanbag on back"
   "Knee walk with beanbag on head"
   "Walk backward with beanbag on back of hand"

SOURCE: Adapted from Savel & Leme, 1985
BALANCE PUZZLES

GOAL: Balance, body awareness

LEVEL OF PLAY: Parallel

EQUIPMENT: Balance puzzles (directions follow)

DESCRIPTION: Students are asked to match their body parts to those on the various balance puzzles.

ORGANIZATION: Spread the balance puzzles around the gym. Break the students into small groups. Ideally, students should be paired with a peer tutor for the initial learning of this activity.

TEACHING SEQUENCE:
1. Initially give step-by-step instructions
   
   SAMPLE
   "Hand on"
   Tap student's hand and picture of hand
   
   "Foot on"
   Tap student's foot and picture of foot
   
   "Foot on"
   Tap student's other foot and the other foot on the picture.

2. Have peer tutor stand next to the balance puzzle and model the particular balance pose, saying "Craig, do this". You are still expecting the student to perform the balance pose on the picture.

3. Ask the student to name the body part on the puzzle
   "Craig, what's this?"
   Craig "hand"
   "That's right, it's a hand"
   "Put hand on" wait for response
   "What's next?"

This helps students to become less prompt dependent and feeds in the language concepts as well.
TEACHING SUGGESTIONS:

1. Place balance puzzles on floor and ask students to match their body parts to those pictured. Balance poses are performed on the balance puzzle.

2. Place balance puzzles on the floor. Students balance on the body parts pictured, next to the balance puzzle.

3. Hold balance puzzle in front of student and ask him/her to assume that balance pose. The child must balance with the correct parts (right or left), as well as in the same position as shown on the puzzle, with no other body parts touching the floor.

4. Show the students a balance puzzle and then remove it from view. Ask students to remember the puzzle and reproduce the balance pose.

5. Lay ten to twenty balance puzzles out on the floor. Students perform each pose as quickly as possible while moving from card-to-card.

6. Use balance puzzles in conjunction with music. Students move about the room until the music stops, at which point they find a balance puzzle and assume the pose.

7. Balance puzzle obstacle course. Set up a simple obstacle course with tables, benches, chairs and a long rope as the pathway to be followed. Place various balance puzzle cards at intervals throughout the course. Whenever a student reaches a card, he/she must assume the pictured balance pose before continuing. A few cards may be stacked face down at each interval requiring students to draw their balance card, pose, and replace it under the stack. This method assures that the child does not simply copy the movements of the child ahead of him/her.

PARTNER TOSS

GOAL: Throwing, catching, tracking

LEVEL OF PLAY: Associative

EQUIPMENT: 1 bean bag for each pair of students

DESCRIPTION: Have the partners start relatively close to each other. Each time your partner tosses you the bean bag and you catch it, take 1 step back. If you drop it, keep trying.

ORGANIZATION: Divide the class into pairs and have each pair stand facing each other on poly spots placed one foot away from a center line. Place beanbags in front of the poly spots on one side of the line.

[Diagram of arrangement: X X X X □ □ □ □ at the top labeled CENTER LINE. Below it is □ □ □ X □ □ □ □ students on spots.

TEACHING SEQUENCE: (Partners - Jeff and Nathan)
1. Stand on spot
2. Pick up bean bag
3. Throw to (Partner's name)
4. Partner's name catch
5. After catch, step back
6. Throw to other partner's name
7. Actual verbal prompting and reinforcement may go as follows. Teacher: "Jeff, come here". (Teacher is standing next to spot) "Stand on spot". "Nathan, come here". (Teacher moves) "Stand on spot". "Jeff, pick up bean bag." Say: "Nathan catch." Jeff echoes "Nathan catch." "Throw to Nathan". "Nathan, good catch; step back".

TEACHING SUGGESTIONS:
1. This activity may be done with any object: balls, water balloons, frisbees, aerobies, etc....
2. Change the set-up of the activity from using a horizontal center line to a vertical center line and see if the students can generalize the skill application, i.e.

[Diagram of change from horizontal to vertical setup labeled (ENM - AERIAL VIEW)]

CAPTURE THE CONE

GOAL: Cooperation, communication, change direction

LEVEL OF PLAY: Associative

EQUIPMENT: 1 hoop for every 2 children; 1 cone for every hoop; music of some sort

DESCRIPTION: The students are divided into pairs. Each pair stands inside a hoop and holds it at waist level. As the music begins, the pairs move around the room. When it stops, they must find a cone (nucleus) nearest to them and surround it with the hoop.

ORGANIZATION: Divide the class into pairs. Hand out 1 hoop for each pair and scatter the same number of cones. Due to the students' proximity in the hoop, they are forced to cooperate in moving around the room.

TEACHING SEQUENCE:
1. "Mike and Jeff stand in hoop"
2. Pull hoop up to waist level saying
3. "Hold hoop"
4. "Listen for music"
5. "Music on - move"
6. "Music off - find cone"

TEACHING SUGGESTIONS:
1. Students may also hold onto the outside of the hoop. They could then place the hoop over the cone when the music stops.
2. Begin using the same number of cones as there are pairs of students. Once students are familiar with the game, try changing the number of cones. Use fewer cones than the number of pairs and see how students respond. Allow them to try to solve the problem.
NON-ELIMINATION SIMON SAYS

GOAL: Following directions, leader/follower roles

LEVEL OF PLAY: Associative

EQUIPMENT: None

DESCRIPTION: 2 games will be going at the same time, each with a leader who performs certain movements either with the command "Simon says" or "Do this". The rest of the class must follow the leader only when he/she says "Simon says". When a child is eliminated from one game, he/she merely turns around and joins in with the other game. Everyone is the leader at least once and there is no elimination or exclusion.

ORGANIZATION: 2 games with 2 parallel lines. The leaders opposite the lines and those in the lines have their backs to those in the other game.

LEADER

LEADER

TEACHING SEQUENCE:
1. Leader: "Simon says _____ or "Do this"
2. Person(s) not following "Go to other game"

TEACHING SUGGESTIONS:
1. Use an egg timer for the leader position. Set the timer for 2 minutes and when the timer goes off, the leader changes.
2. Mark positions on the lines using tape.
3. If distraction proves to be too great for the leader, stagger the game positions, i.e.

HOOP UP AND DOWN

GOAL: Body awareness

LEVEL OF PLAY: Associative

EQUIPMENT: Hoops or bicycle tires

DESCRIPTION: Students pass a hoop around a circle. The first student steps in the hoop and pulls it up and over the head. The second student takes the hoop from the first and slides it down around his/her body and steps out.

ORGANIZATION: Circles of 4-5. Places may be marked using poly spots or tape. Place a hoop in front of one spot. (May include peer tutors, associates, or teacher as well as students.)

TEACHING SEQUENCE:
1. "Hold hoop"
2. "Step in"
3. "Pull up"
4. "Give to ___"
5. "Hoop over head"
6. "Let go"
7. "Step out"
8. "Give to ___"

TEACHING SUGGESTIONS:
1. Have teacher, associate, or peer begin the activity in each circle to provide a model.

WALKING THE TIGHT-ROPE

GOAL: To develop or improve the sense of balance

LEVEL OF PLAY: Associative

EQUIPMENT: A piece of elastic 1/4-1/2" wide and 6-12' long
Mat

ORGANIZATION: Two "holders" stand facing each other at opposite ends of a mat.

DESCRIPTION: Two people (aides or other children), each holding one end of the elastic, stretch the elastic out over play area and anchor at waist level. The "tight-rope walker" then steps on the elastic, pushing it to the mat, and attempts to "walk the tight-rope" from one end to the other.

TEACHING SEQUENCE:
1. Tape an X on the mat to indicate the starting point.
2. Hold the elastic to the floor and instruct the student to "step on"
3. "Walk on"
4. "Step off"
5. Once students have experienced the tightrope walk, let them try to get on the tightrope by themselves.

TEACHING SUGGESTIONS:
1. Tie loops in each end of the elastic to make handles. This will make the elastic easier to hold and will decrease the chances of the elastic snapping out of the students hand.
2. The elastic may also be tied to the "holders" belt loops. This really minimizes the chances of a student letting go.
3. Encourage the students to walk on the tightrope sideways, forward, and backward.
4. Do the activity with shoes off, to increase the stimulation to the feet. This helps students get the feel of the "tightrope" and helps them to know where their feet are on the elastic.
5. This activity provides the student with immediate feedback as to the correctness of their movements; i.e., if they miss the tightrope, it pops up.

BEACH-BALL TRANSFER

GOAL: Cooperation, coordination

LEVEL OF PLAY: Associative

EQUIPMENT: 2 towels; 2 beach-balls; 2 buckets, boxes, or wastebaskets; 4 poly spots or carpet squares

DESCRIPTION: The objective of the game is for 2 students to cooperate in holding a beach-ball on a towel held between them in order to accomplish the task of getting the ball in the bucket. Each pair grasps a towel at opposite ends and a beach-ball is placed on the towel. The pair tries to transport the ball to the bucket and drop it in without the ball falling off the towel. If the ball falls off the towel, the instructor replaces it.

ORGANIZATION: Pair students. Depending on class size, an additional station may be set up.

6 OR FEWER STUDENTS

Poly spots -> 0 0 0

0 0 0

8 OR MORE STUDENTS

Poly spots

0 0

0 0

TEACHING SEQUENCE:
1. Stand next to a poly spot and call a student "Nathan come here; sit down"
2. Repeat the directions with each student until all students are seated.
3. Place a towel on the floor in front of the students.
4. Place a beach-ball in the center of the towel and with a student, peer tutor, or associate, demonstrate picking up the ends of the towel with the ball, carrying the ball on the towel to the bucket, dropping the ball in the bucket, and returning to start.
5. Verbally direct the students through the activity:
   "Nathan and Christopher stand up"
   "Hold towel"
   "Carry ball"
   "Ball in"
   "Go back"
   "Sit on spot"
TEACHING SUGGESTIONS:
1. Ask classroom teacher or associate the best pairing arrangement based on behavior, personality, and ability.

2. You may begin teaching this activity without the boxes or buckets. Merely have students work together in carrying the ball on a towel around a cone and returning.

SCOOTER TRAIN

GOAL: Cooperation and strength

LEVEL OF PLAY: Associative - Cooperative

EQUIPMENT: Scooters - one for each student
2-3 deck tennis rings and 2-3 jump ropes
(Tie the ropes to the deck tennis rings for pullers)

DESCRIPTION: Students lie prone on scooters, one holding the ankles of the student in front. One or two students are "designated engineers" (i.e. they pull the scooter train).

ORGANIZATION: Assemble "trains" of 2-3 students. Assign an engineer for each train.

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TEACHING SEQUENCE:
1. Instruct the scooter riders to get on their scooters.
   "Lie down on scooter, on tummy"
2. Begin assembling the train with the caboose.
   "Hold ankles"
3. Repeat this process until the train is assembled.
4. Give the first person in the train the deck tennis ring.
   "Hold ring"
5. Position the engineer in front of the train, giving him/her the end of the rope.
   "Hold rope"
6. Instruct the engineer to pull.
   "Walk"

TEACHING SUGGESTIONS:
1. Assemble the train having the smallest or weakest student at the end.
2. The teacher may be the first engineer, so that students get the idea of pulling the train around the gym.
3. If a weaker student is the engineer or puller, you may want to substitute a hoop for the deck tennis ring and rope. This way the puller can stand in the hoop to pull the train.

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4. Challenge the students to see how many "cars" they can get in the train.
STAR BOWLING

GOAL: Bowling skills; object projection - accuracy; cooperation

LEVEL OF PLAY: Associative - cooperative

EQUIPMENT: Folding mats and tires; bowling sets; score sheets; desks
Optimally, 3 students are assigned per lane.

DESCRIPTION: An associate or peer tutor is assigned to each lane. Bowlers take turns bowling, returning the ball, setting pins, and assisting with score keeping.

ORGANIZATION: Mats are placed against a wall and perpendicular to the wall to form lanes. Ten pins are set on tape marks in each lane. One student is stationed standing on the mats and is the ball return. One student bowls. One student assists with scoring at the desk. Each bowler bowls one ball. The sequence is as follows: the bowler bowls, then resets his/her own pins and becomes the ball return person. The ball return person carries the ball back to the starting line and becomes the scorer. The scorer, after assisting with the score, becomes the next bowler and the sequence continues.

Scoring is as follows:
- 0 Pins = line through the frame
- 1-5 Pins = *
- 6-9 Pins = **
- Strike = ***

Each student receives his/her own score sheet

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[Diagram of the setup with labels for scorer, bowler, ball returner, and stands on mat]
TEACHING SEQUENCE:
Instructions to 1 bowler through entire sequence.
1. "Fingers in holes": Allow students time to problem solve getting their fingers in the holes.
2. "Roll ball"
3. "Go set pins"
4. "Pin on tape" repeat until all pins are set
5. "Stand on mat"
6. After pins are knocked down, "Get ball"
7. "Carry to starting line"
8. "Put on ring"
9. "Sit at desk"
10. "Mark stars"
11. "Your turn to bowl"
12. "Stand up"
13. "Go to ball"
14. Repeat entire sequence

TEACHING SUGGESTIONS:
1. Reduce the number of pins if pinsetting is taking too much time.
2. Vary the distance away from the pins depending on the students' abilities. Tape lines may be of assistance to designate the varying distances.

3. Depending on functioning level, students may be asked to count the number of pins down.
4. Students may either draw the stars, or stick stars in the boxes to record the score.
5. Have students place the ball on a deck tennis ring on the starting line.
6. Write the scoring guidelines on the blackboard to assist associates or peer tutors.

SOURCE: Cliff Breese, Physical Education Instructor, Wright Elementary, Cedar Rapids Community School District
HOOP PASS

GOAL: Cooperation, body awareness

LEVEL OF PLAY: Cooperative

EQUIPMENT: Hula Hoop or bicycle tire

DESCRIPTION: Students form a circle holding hands. One student has his arm through the hoop or tire. The hoop is passed around the circle without the students letting go of hands.

ORGANIZATION: Circle

TEACHING SEQUENCE:
1. "Arm up"
2. "Head in"
3. "Step out"

TEACHING SUGGESTIONS:
1. This is a good activity in which to use peer tutors. They can facilitate the hand-holding and act as good models.

MUSICAL SQUARES

GOAL: Cooperation, sharing

LEVEL OF PLAY: Cooperative

EQUIPMENT: Music, carpet squares

DESCRIPTION: The game is similar to musical chairs except the students are not eliminated and carpet squares rather than chairs are used. The students must all work together in order to fit everyone on the remaining squares. When the music stops, everyone must fit on some part of the square.

ORGANIZATION: Scatter as many carpet squares around the gym as there are students. As the game progresses, remove a square at a time. Students must have at least 1 foot on a carpet square when the music stops.

TEACHING SEQUENCE:
1. "Stand on carpet"
2. "Listen for music"
3. "Music on - move"
4. "Music off - stop"

TEACHING SUGGESTIONS:
1. As students become familiar with the activity, specific ways of moving around the gym may be required: i.e., run, skip, gallop, slide, jump, hop.
2. Bicycle tires may be used instead of carpet squares.
3. By using carpet squares or bicycle tires, wheelchair students may readily be integrated into the activity. Require 1 wheel on the carpet or in the tire.
4. Students may return to the same carpet each time the music stops. They may also become rather irritated when "their carpet" is removed. Help them get to a different carpet. You may want to remove "their carpet" early in each game to help them understand the object of the game. Direct the student to share with another.

FROZEN BEAN-BAG

GOAL: Cooperation, dynamic balance

LEVEL OF PLAY: Cooperative

EQUIPMENT: Bean-bag for each student

DESCRIPTION: This is a game on helping. All the children move around the gym while balancing a bean-bag on their head. If a bean-bag falls off of someone's head, someone else must pick it up without dropping theirs, and hand it to them. If your bean-bag has fallen, you are frozen until someone helps you. The object is to help each other and keep everyone unfrozen.

ORGANIZATION: Give each child a bean-bag and scatter them. On the signal have them move around the room carefully. Emphasize watching out for others.

TEACHING SEQUENCE:
1. "Bean-bag on head"
2. "Walk"
3. "If bean-bag falls, stop"
4. "Who is stopped?"
5. "Jimmy is stopped"
6. "Help Jimmy"
7. "Pick-up bean-bag"
8. "Give to Jimmy"
9. "Jimmy, bean-bag on head"
10. "Walk"

TEACHING SUGGESTIONS:
1. Prompt students to notice who needs help.
2. Students whose bean-bags have fallen off may be instructed to solicit help by saying "I need help" or signing help.
3. Students helping to pick up bean-bags may need to hold their own bean-bags on their heads as they bend down to pick up their friend's bean-bag.

GROUP JUGGLING

GOAL: Short term memory, sequencing cooperation

LEVEL OF PLAY: Cooperative

EQUIPMENT: Any type of ball that is easily caught by most members of the class

DESCRIPTION: Students stand on a circle, facing the center, holding one hand in the air. The teacher tosses the ball to a student on the other side of the circle, and that person tosses it to a third person and so on until everyone has tossed and caught the ball once, establishing a pattern. To help develop a pattern, each person drops his hands once he has had a turn. The last catcher tosses the ball back to the player who started the pattern and the pattern can be run again. Students must remember who throws to them and who they throw to, as this pattern remains the same.

ORGANIZATION: Circle

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TEACHING SEQUENCE:
1. Catch ball when name is called "Andy catch"
2. Call name of student with arm up. Say "Tammy catch"
3. "Throw to Tammy"

TEACHING SUGGESTIONS:
1. For students with very low skill level, try using a foam cube, beanbag, or medicine ball as these items do not roll away as readily.
2. Use a circle already designated on the floor. Cue the students to the color of the circle.
3. Place poly spots around the circle to designate student positions.
4. Once students have mastered the pattern, add an additional ball, so that the group is juggling 2 or 3 balls at the same time.

KICK IT AND RUN

GOAL: Tracking, kicking, fielding

LEVEL OF PLAY: Cooperative

EQUIPMENT: Nerf soccerball, 2 bases

DESCRIPTION: The kickers line up in single file to one side of home plate (may want to have each student stand on a poly spot). The fielders (students and teachers - students cued and given assistance as needed) arrange themselves in a semi-circle in the field (use tape marks to indicate the semi-circle formation). To begin the game, one of the kickers steps up to home plate and kicks a stationary ball out into the playing field. She/he then runs to first base and back home. The fielders must catch the ball and run to home with it. The game continues until all the kickers have been at bat; then kickers become fielders (except for teachers).

ORGANIZATION: Class divided into two equal teams; teacher and aides are always out-field with one teacher assisting at home.

TEACHING SEQUENCE:
Kickers
1. "Stand on line"
2. Person up, stands on home
3. "Kick ball"
4. "Run to first"
5. "Run home"
6. "Go to the end of the line"

Fielders
1. "Watch"
2. "Catch ball"
3. "Run home"
4. "Ball on ring"
5. "Go back to X"
Kick it and Run (Continued)

TEACHING SUGGESTIONS:
1. This activity may utilize other skills
   - Kick a rolled ball
   - Bat a pitched ball and run
   - Throw it and run
   - Bat a ball off a tee and run
2. Assist wheelchair students in running the bases and fielding
   (ball in his/her lap and push him/her home for out when
   fielding).
3. When using a stationary ball, place the ball on a deck tennis
   ring or bean-bag to make sure that it remains stationary.
4. This game may be used as a lead-up game to teaching any base
   running activity. Increase the number of bases as students
   gain understanding.

PADDLEWHEEL

GOAL: Throwing and catching

LEVEL OF PLAY: Cooperative

EQUIPMENT: Ball

DESCRIPTION: The teacher in the center throws a ball to a student in the circle, who returns it to the teacher. The teacher then throws a ball to the next person in the circle. Play continues all the way around the circle until someone misses, becoming the new center person.

ORGANIZATION: The teacher stands in the center of a circle. The students stand on a circle around the teacher.

TEACHING SEQUENCE:
1. "Andy (student) catch"
2. "Throw to Ann (teacher's name)"
3. "(Next student's name) catch"

TEACHING SUGGESTIONS:
1. Designate a circle on the gym floor, placing poly spots to designate all positions.
2. Vary the size and type of ball according to skill level.
4. Complete the entire pattern around the circle before changing from the teacher to a student in the center.

SOCK THE BOX

GOAL: Throwing with force and accuracy

LEVEL OF PLAY: Cooperative, competitive

EQUIPMENT: Large, empty cardboard boxes and as many balls as available.

DESCRIPTION: The object of the activity is to throw balls at the box in order to move it across a goal line. Each team throws from behind their goal line. The instructor is responsible for keeping the balls out of the middle.

ORGANIZATION: Two teams each on opposite sides of the gym. The box is placed in the center of the gym.

1. "Pick up ball"
2. "Throw hard at box"

TEACHING SUGGESTIONS:
1. Initially, students may play this game with beanbags in a circle formation until they get the idea of throwing hard enough to move the box.
2. Ball size and type may be varied depending on the students' ability levels.
3. A blow-up punch bag (the toy store kind with sand in the bottom) and beanbags may be used as lead-up equipment to help students with the cause and effect and force aspects of the game: i.e., the harder you throw, the more the punch bag moves.
4. A cage ball or a number of boxes may be substituted as targets.

SOURCE: Adapted from Tillman & Toner, 1983, p. 189.
BASE BASKETBALL

GOAL: Dribble, pass, and shoot in a determined sequence

LEVEL OF PLAY: Cooperative - competitive

EQUIPMENT: 4 bases
2 basketballs and a tire
basketball court

DESCRIPTION: Students participate in a half court structured
basketball game, incorporating the fundamentals of dribbling,
passing, and shooting a lay-up.

ORGANIZATION: Students are instructed to sit outside of the half court
line. Two basketballs are placed in a tire at the center of the
1/2 court line. 2 bases are placed half way between the 1/2 court
line and the free throw line and 2 are placed just outside the lane
at the free throw line (See diagram).
TEACHING SEQUENCE:
1. "Get ball"
2. "Dribble (bounce ball) to base"
3. "Pass (throw) to ___"
4. "Dribble to basket"
5. "Shoot" (if the student misses, they shoot again until the basket is made).
6. Students should rebound the ball "Get ball"
7. "Dribble to tire"
8. "Put in tire"
9. The student on the 1st base then moves up to the base by the free throw line and the sequence repeats itself.

TEACHING SUGGESTIONS:
1. Set-up and demonstrate the sequence with students on one side of the half court.
2. Assign a teacher or associate to each set of bases to verbally prompt students through the activity in the initial learning phases.
3. Once students are comfortable with the half court sequence, the activity may be expanded to a full court modification. See the following diagram for the full court set-up.

SOURCE: Ec Johnson, teacher, Prairie Junior High School, College Community School District.
PIN BALL

GOAL: Object projection force and accuracy

LEVEL OF PLAY: Cooperative, competitive

EQUIPMENT: Yarn balls, net, 10 bowling pins

DESCRIPTION: Pins are set on the endlines of a volleyball court and half of the balls are scattered on each side of the net. On a signal, students pick up balls and throw them over the net trying to knock down the pins. (Opposing players may catch the balls or block them with any part of their bodies.)

ORGANIZATION: Two teams scattered on opposite sides of the net

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TEACHING SEQUENCE:
1. "Find ball"
2. "Pick up ball"
3. "Throw over"
   REPEAT
4. "Pins all down"
5. "Stand pins"
6. "Game done"
7. Put equipment away: "Balls in box"
   "Pins in box"

TEACHING SUGGESTIONS:
1. Empty cans may be used as targets if bowling pins are not available. Students really like the sound of these falling over, so it's a good alternative piece of equipment.
2. Tape X's or use poly spots as pin markers so that students know where to reset the pins.
3. Adjust the height of the net to accommodate the age, height, and throwing ability of your students.
4. As students learn the sequence of the game, the objectives of (1) catching the balls as they are thrown over the net or (2) blocking the pins may be introduced.

VIII LEISURE ACTIVITIES
TITLE: LEISURE ACTIVITIES

RATIONALE: Appropriate use of leisure time is a serious problem for autistic youngsters. It is for this reason that physical education programs should emphasize leisure skill training, with the ultimate goal of generalizing leisure skills learned in class to the community setting. In selecting leisure activities, the following should be considered:

1. Select age-appropriate activities and equipment. See what the "normal" kids of the same age are doing. Incorporate that and novel pieces of equipment in your planning to encourage participation by both the autistic students and the "normal" peers.

2. Choose functional activities. Team sports are not functional for this population as the students do not understand the complexities of a game or competition, nor do they have the strategies to play sports. Teaching basketball shooting skills or lower level activities (Horse, Around the World) is functional as they are activities that can be done near home, with peers or siblings, and do not require a high level of social skills. Thus, the activities meet the developmental and social level of the student and can be used in a number of situations with peers and family successfully.
3. Because autistic youngsters are more anti-social (i.e. they prefer to be alone or away from people) than social, it is helpful to select more individual leisure activities. Choose activities that the students can participate in but can still be on their own. Rollerskating, cross-country skiing, and bike riding are all activities that can be done in a group but with a degree of individuality.

4. It is helpful to talk with parents to get their input as to what types of activities they typically engage in as a family. Then select activities that encourage family and peer participation and can be fun experiences.

5. Take a look at the maladaptive behaviors of your students and try to normalize these with equipment or activity to create incompatible behaviors. For example, toe walking is extremely difficult on rollerskates and jumping and flapping is next to impossible on ice skates or cross country skis.

6. Finally, begin skill training at a young age with lifetime leisure activities in mind, systematically planning for generalization across settings and trainers.
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* Activity elaboration appears on the following pages.
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* Activity elaboration appears on the following pages.
Leisure Activities (Continued)

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Leisure Activities (Continued)

TEACHING SUGGESTIONS

Rollerskating

1. Initially, if students are having trouble with balancing on the skates, have them stand in the skates on a tumbling mat.
2. Velcro straps may be placed around the student and under the arms as an assistive device for balance.
3. Use the "whole" rather than "parts" approach to teaching. That is, have them learn on both skates, as training on one skate is a completely different skill than skating on two skates.
4. When assisting students by standing in front of them and holding their hands, wear moon boots to protect your shins and toes.

Rollerskating/Iceskating: Skill Components

1. Get equipment
2. Put skates on
3. Adjust skate size or laces/ask for help
4. Get to stand
5. Stand independently
6. Return to stand after a fall
7. Skate with assistance
8. Skate independently
9. Remove skates
10. Put equipment away
Leisure Activities (Continued)

Racquetball

1. Teach lead-up skills against the wall in a small room if possible. Many students are not prepared for the size of the racquetball court and do not like going in the "little door".
2. Allow the students to use high density foam balls to slow down the activity if necessary.

Archery

1. Make sure students respond to step-by-step directions to insure safety. Otherwise, staff "high-risk" or impulsive students 1:1.
2. Give each student 3-5 arrows. Each student should have their own color arrows to facilitate retrieval and alleviate confusion.
3. Students should stand behind designated mats until told to retrieve their arrows.
4. Hand-over-hand assist and body positioning may be necessary to insure success.

Rappelling

1. Allow students to put on their own seat harness, but check the safety of the fastening yourself.
2. Train students to your commands on stall bars in the gym before attempting the cliffs.
3. When rappelling on the cliffs, have students wear long pants, long sleeve shirts or jackets, helmet, and gloves to protect them.
Leisure Activities (Continued)

Bike Riding:

The actual skill can be readily taught to most autistic youngsters using the type of bike appropriate to their skill level. Caution should be taken as autistic youngsters do not have very good judgement or foresight to determine potentially dangerous situations. If you ride bikes in the community, make sure your students have well developed street crossing skills. Otherwise, put them on the back of your tandem bicycle.

Billiards:

1. Begin by teaching the stance and how to hold the pool cue. Here is the task analysis we found useful:
   
   Have student stand about 1 1/2 feet from the table
   
   with feet shoulder width apart
   
   Bend forward at the waist
   
   Place left fist on the table (for right hander)
   
   Place the cue under index finger
   
   Spread bottom three fingers
   
   Student should then have a good stance and a stable bridge.

2. Have student begin by shooting a numbered ball into a pocket. Face the number toward the student and have them hit the ball on the number.
IX COMMUNITY RESOURCES
COMMUNITY RESOURCES

To a great extent, the success of generalizing skills to community facilities is dependent upon the instructor's effort in engineering a "receptive" atmosphere. This is in no way a small task and requires a considerable amount of time in planning and public relations. It is important to educate the personnel at the given facility about the nature of autism. We are all afraid of or apprehensive about things that we do not understand. Information and explanations help us to understand and accept the individual differences that are the wonder of humanity. Our students are definitely different, but it is part of our job as special educators to break down the barriers of misunderstanding and prejudice and help open the doors to the community. The following are some considerations when planning to develop community based leisure programs:

1. Select activities that the student may be likely to participate in with his/her family.

2. Visit the facility personally prior to bringing the class so that you can troubleshoot the environment and educate the management and personnel so you know what to expect.

3. Develop an ongoing rapport with the personnel.

4. Take advantage of experts in the given leisure area, but team teach to make sure that their explanations are understood by the students.

5. Take sufficient personnel on the outing so as to handle any behavior problem that might occur.

6. Take a back-up vehicle in case a student needs to be removed from the activity for medical or behavioral reasons.
7. Plan to use community facilities at other than "peak" times, especially in the early stages of training.

8. Be courteous and appreciative of the service that you are using. Have students write thank-you letters to the management.

9. Assume responsibility for the entire activity and model effective teaching and control techniques.

10. Learn the "rules" of the establishment and, when possible, teach them to the students.

11. Train the entire sequence in the activity as far as possible. For example, take the city bus to the bowling alley having students show their bus passes or pay for their fares. Students should request their shoes, get their bowling balls, and go to the designated lane. Upon activity completion, equipment should be returned and the area cleaned up.

12. Make sure to leave yourself enough time as abrupt changes precipitate behavior flare-ups.

13. If students at the secondary level are working on money skills, allow them to pay for the activity.
Developmental exercises and warm-up activities

Mats
Wedge
Bolster
Masking Tape
Gymnastic Ball or Cage Ball

Fitness, coordination, and balance activities

Exercise Bike
Jogging Tramp
Pogo Stick
Climbing Ladder
Horizontal Ladder
Bicycle Inner Tubes or Surgical Tubing
Jump Ropes: Long and Short
Chinning Bar
Weights: Hand Weights and Ankle Weights
Weight Machines
Vestibular Board
Balance Beam: Low and Standard Height
Vaulting Box or Horse
Car Tires
Balance Puzzles
Inner Tubes
Equipment (Continued)

Play Skills

ANY AVAILABLE PLAYGROUND EQUIPMENT

Swings
Monkey Bars
Horizontal Ladder
Basketball Hoop
Tetherball
Tire Maze
Merry-Go-Round
Slide
Four Square Court

BALLS:

Balloons
Punchballs
Beachballs
Beanbags
Whiffle balls (all colors and sizes)
Yarn Balls
Nerf Balls: Round, Footballs, and Soccerballs
Cage Ball
Basketball
Volleyball
Soccerball
Ping Pong balls
Medicine balls
Equipment (Continued)

Play Skills (Continued)

Scooters
Flying Turtles or Roller Racer
Bounceback or Pitching Net
Frisbees: foam, cloth, standard
Aerobies
Bicycle Tires
Hoops
Poly Spots
Carpet Squares
Leisure Activities

Sledding and Tobogganing:
   Sleds
   Sliders
   Garbage bags
   Toboggans

Rollerskating:
   Skates and keys

Iceskating:
   Skates

Racquetball:
   Plastic racquets and nerf balls
   Racquetball racquets and balls

Archery and Darts:
   Arrows
   Archery targets
   Suction darts
   Safety dart set

Rappelling:
   Rappelling Rope
   Seat Harness
   Safety rope
   Carabiners
   Webbing
Leisure Activities (Continued)

Cross Country Skiing:
  Cross Country skis and bindings
  Boots
  Poles
  Extra Socks

Bike Riding:
  Big Wheels
  Tricycles (child and adult sizes)
  Bicycles with adjustable training wheels
  Tandum bicycle

Golf:
  Irons and putters
  Whiffle golf balls
XI BIBLIOGRAPHY


Bibliography (Continued)


Bibliography (Continued)


Bibliography (Continued)


Bibliography (Continued)


