

# TEACHING THE THROWS

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CONTENTS

	Index
	Introduction
CHAPTER ONE	The Teaching Progressions for the Throwing Events The Development of the Athlete Common Root Movements Safety
CHAPTER TWO	Stage 1 - Rudimentary Throwing Activities Illustrations Group Throwing Games
CHAPTER THREE	Stage 2 - Pre-Throwing Activities Discus/Hammer/Shot Put/Javelin Illustrations Throwing Activities
CHAPTER FOUR	Stage 3 - Fundamental Throws Structure of Classes Measurement of Throws
CHAPTER FIVE	Throwing Area Dimensions The Rules in the Throwing Events Improvised Equipment for the Throwing Events Specifications for the Throwing Implements
CHAPTER SIX	Stage 4 - Skill Throwing Discus Hammer Shot Put Javelin
	Bibliography

## INTRODUCTION

The purpose of this Manual is to provide a service to Teachers of Physical Education and Coaches of Track and Field Athletics who wish to improve their knowledge in the 4 throwing events

It is structured to cater for the junior athlete. The subject matter ranges from rudimentary throwing activities to the complete throwing movement

It is up to the Teacher and the Coach to decide, given their own set of circumstances, as to how far they are able to progress teaching the individual events in a class situation. The Manual provides sufficient information to deal with the more talented and enthusiastic athletes who are worthy of individualised tuition and coaching

The text also lays emphasis on avoiding either physical or psychological stress with children in the pre-puberty years ie under 15 years for girls and under 16 years for boys. At the same time much importance is placed on reinforcing these 'skill-hungry years' ie 8-13 years, with the teaching of correct techniques in an enjoyable and stimulating environment. It is hoped that this approach will lay the basis for throwing proficiency later in life

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In submitting this project I would like to acknowledge a debt of gratitude to Mr Carl Johnson, the B.A.A.B. Technical Director for Coaches Education for his advice, help and guidance

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CHAPTER ONE

The Teaching Progressions for the Throwing Events

The Development of the Athlete

Common Root Movements

Safety

## THE TEACHING PROGRESSIONS FOR THE THROWING EVENTS

Children should be exposed to as great a variety of throwing experiences as possible. They have a great capacity for copying and learning new skills during the 8-13 year age group ie the 'skill hungry years'

It is recommended that the teaching progression should follow the stages listed hereunder

S T A G E	TEACHING PROGRESSIONS FOR THROWING ACTIVITIES IN THE PRE AND POST PUBERTY YEARS				
	<u>Age Grouping (years)</u>	<u>Activity Category</u>	<u>Activity</u>	<u>Equipment</u>	<u>Teaching Situation</u>
1	8-10	Rudimentary throwing activities	Group throwing games	variety of balls & equipment as appropriate	Class
2	9-11	Pre-throwing activities	Throwing activities (movements formalised)	variety of throwing equipment ie balls	Class/ Groups ie 2's 3's etc
3	10+	Fundamental throws	Throwing skills activities	Actual equipment/underweight & improvised equipment	Class
4	10+	Skill throwing	Refined throwing activities	Actual equipment	Individual athlete

Great flexibility should be introduced when following the age groupings listed above. The text merely suggests that some children will develop faster than others and at the age of 10+ years may be able to involve themselves in some aspects of 'refined throwing activities'.

What follows is an explanation of the 4 stages of the Teaching Progression

### Stage 1 - Rudimentary Throwing Activities

This stage restricts itself to group or team throwing activities with a variety of equipment. It seeks to introduce the athlete to throwing within a games type situation without specifically addressing itself to any of the four throws

The subject is dealt with in Chapter 2

### Stage 2 - Pre-Throwing Activities

This stage introduces general throwing activities in such a way as to introduce the Common Root Movements

within a variety of General Throwing Activities associated with the four throwing events

The subject is dealt with in Chapter 3

### Stage 3 - Fundamental Throws

This is an extension of Stage 2 in that it places these root movements and general throwing activities into a formalised class structure

The subject is dealt with in Chapter 4

### Stage 4 - Skill Throwing

This deals with the individual skills in each of the four throwing events and is carried out on an individualised basis

The subject is dealt with in Chapter 6

The first three stages emphasise class or group involvement with the progression from a games type situation to a skill learning situation. Practical demonstration will be invaluable. Enjoyment and the early introduction of a healthy competitive environment should be encouraged using a variety of throwing implements from either a sitting, kneeling or standing position including throws on the move. Emphasis should be on the following

- (a) Correct throwing skills
- (b) Throwing for (i) distance (ii) height (iii) accuracy
- (c) Safety (see Chapter 1)
- (d) Class involvement

## THE DEVELOPMENT OF THE ATHLETE

### The Young Athlete (under 14 years)

Basic skills in all disciplines should be taught and the athletes developed with the 5 S's in mind - speed, strength, stamina, style and suppleness. Training should be restricted to 2-3 days per week

### The Novice (age 14 and 15 years)

Throwing talent starts to emerge and there may be a small degree of specialisation due to success. It is strongly recommended that the athletes continue to compete at other events during this stage. Training will have increased to 3-4 days per week. There will be some refinement of the technique depending on the demands of the School P E programme

### Specialisation (age 16 and 17 years)

The talented throwers start to specialise and a training discipline starts to emerge which is encouraged. They continue to compete in other events particularly the sprints. The refinement of the technique continues and training increased to 3-5 days per week

## Advanced (aged 18+ years)

The thrower is now taking his sport seriously and will begin to periodise his training year. Within the next two years serious thought will be given to sophisticating the training and trying to identify competitive problems. Training will be undertaken 5-7 days per week

### COMMON ROOT MOVEMENTS

Throughout the teaching of the throwing activities it should always be borne in mind that young athletes learn at different levels, some will be slow developers whilst others will be faster. The Teacher or Coach must always be aware of the complexities of physical maturation. When teaching the activities, movements and sequences must be developed from the basic model to the more difficult, with actual movements and skills performed relatively slowly before being done at speed

The following movements can be found in all throwing events. If taught properly they will lay the basis for future skills and movements to be developed. This allays the frustrations, in later years, of having to undo bad technique thus inhibiting overall development in a specific event

#### Weight transfer from right to left

The final throw is initiated by the right foot/leg rotating the hips forward, transferring the weight over the left (front) leg (Figs d - f)

#### Legs first, arms last

It is important that the very strong, but slower moving muscles of the lower limbs accelerate the implement initially (Figs d - e). The weaker, but fast moving muscles of the arms can only be effective when the implement is moving quickly and therefore the arms are used as late as possible (Fig f) - FAST AND LAST

#### Extension

The implement is always released from a stretched, high position - the thrower starts low (Fig b) and finishes high (Fig f) - LOW TO HIGH

#### Left side brace

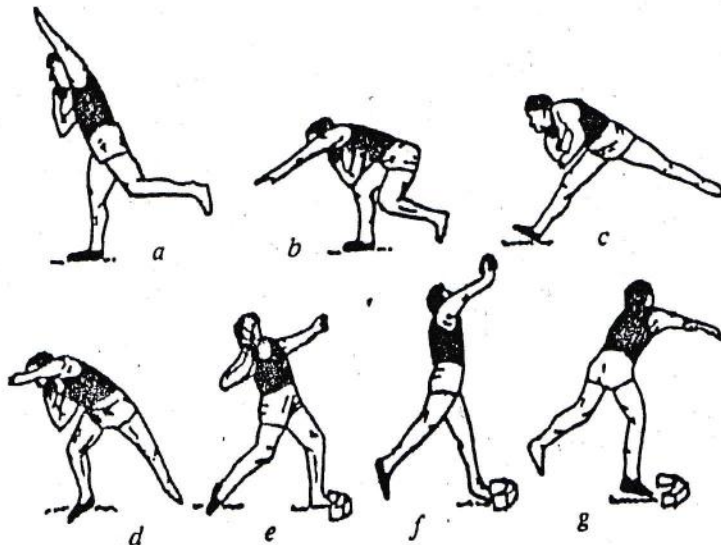
It is quite common to find youngsters collapsing the left side of the body just before release. The left side should be braced to allow the right side to accelerate round it. A strong powerful release position should be taught (Fig f)

#### Torque

Letting the hips lead the upper body (Fig d) creates a spring-like action that, when released, will add an explosive movement to the final action

## Rotation

The ability to express oneself rotationally is essential in all throwing events, and therefore children should experience rotational movement



All the above movements can be developed by using various kinds of implements, from medicine balls to soccer balls to bean bags. Throwing can be fun and should not be restricted to standard implements

## SAFETY

Class control by the Teacher or Coach is absolutely essential as all implements are dangerous and could cause serious injury. The instructional method of ALL THROW - ALL RETRIEVE should be enforced very rigidly

In retrieving the throwing implements they must not be thrown back to the throwing area or circle

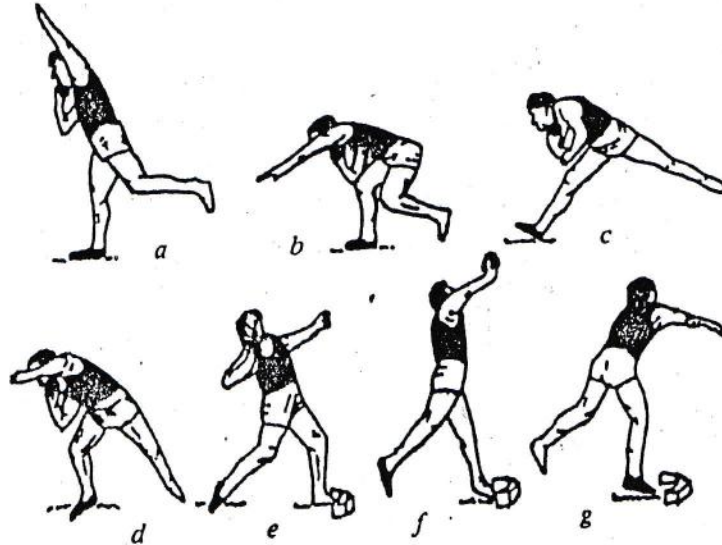
Javelins must be carried with the point facing downwards at all times

The throwing implements must be kept in a good state of repair

Dangerous, wet or slippery throwing area must be avoided

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## STAGE (1) RUDIMENTARY THROWING ACTIVITIES

The following is an explanation of the Group Throwing Games illustrated on the next three pages

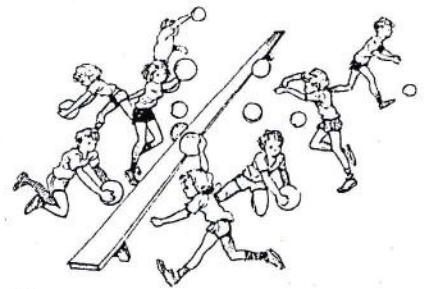
- Fig (a) General running, throwing and passing between pairs, three's etc
- Fig (b) A team either side of the bench, trying to get all the balls on one side, start with each team having an equal number of balls (rules, variation and strict control required by Teacher)
- Fig (c) Target throwing
- Fig (d) Dodge Ball as illustrated either with one athlete in the middle of the circle or several
- Fig (f)
- Fig (e) Throws Relay starting with the ball being thrown to the back and ending with the person at the front who then assumes the role of the thrower. The thrower runs to the back and the process repeated (variations can be introduced by the Teacher)
- Fig (g) Wall Ball to see how long the ball can be kept bouncing against the wall. Time is taken over each throw to encourage accuracy
- Fig (h) Target Throwing as illustrated either with a static or moving target
- Fig (i)
- Fig (j) Dribble and Throws Relay, teams can be used with the first athlete dribbling the ball to a second line, throwing it to the next athlete and staying where he is until the whole team is behind this second line
- Fig (k) Run and Throw Race with athletes running, picking up the ball first and throwing it back over the line they've just run from (rules, variation and strict control required by the Teacher)
- Fig (l) The first athlete throws the ball whilst the second retrieves it, they in turn pass to the back of the line. The team must be an odd number so that when the first athlete gets to the front of the line for the second time he becomes a retriever
- Fig (m) Passing the ball down the line as illustrated
- Fig (n) Dodge Ball but the athletes in the circle form a line using the others to protect them from being hit by the ball
- Fig (o) Volleyball down the line
- Fig (p) Volleyball or Handball rotating the three athletes as determined by the Teacher

- Fig (q) Mass Volleyball or Handball using a variety of balls, slingballs etc
- Fig (r) Dodge Ball as illustrated
- Fig (s) 'Stingers' where the throwers stand on the first line with the second row of athletes on the middle line. Also on this line is a soft ball. On the sound of the Teachers whistle the first row of athlete run, pick up the ball and try and hit the other athletes before they cross the third line
- Fig (t) Indoor Dodge Ball using the walls of the gym to keep the ball in play
- Fig (u) Hit the Bench with the two athletes in the centre preventing this from happening. The athletes on the outside of the circle can pass the ball between them before attempting to strike the bench. The athlete hitting the bench exchanges place with his opposite number
- Fig (v) Dodge ball with the athletes retrieving the ball and taking refuge behind the box (variations can be used by the Teacher)

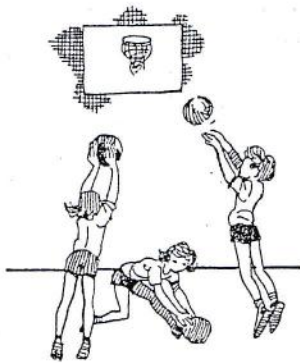
STAGE (1) RUDIMENTARY THROWING ACTIVITIES



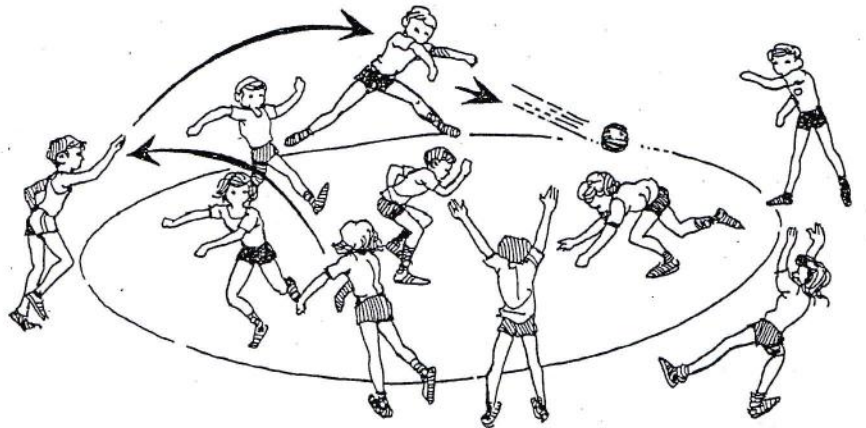
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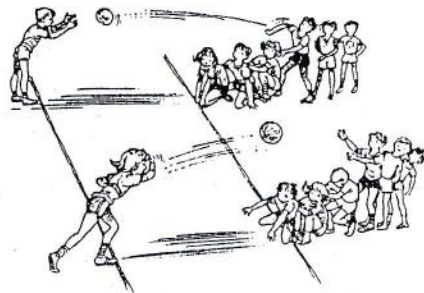
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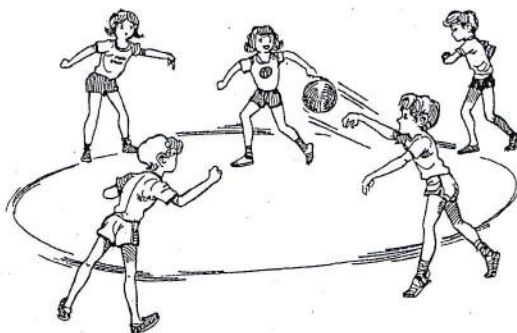
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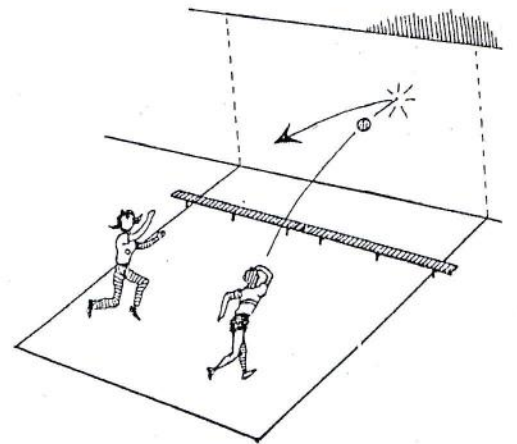
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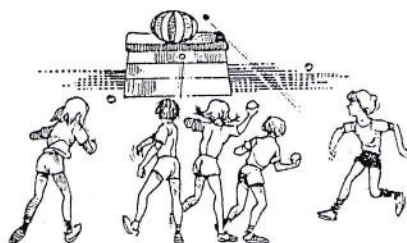
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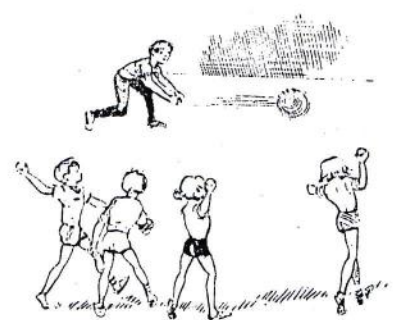
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(g)

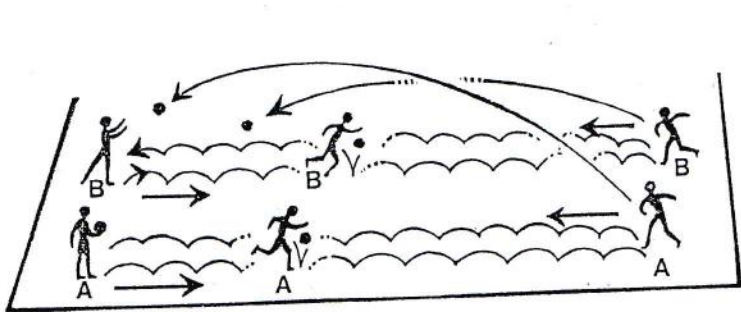


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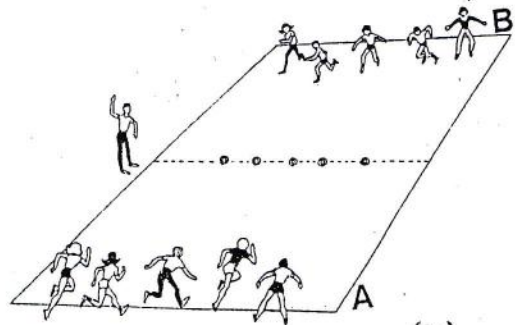


(i)

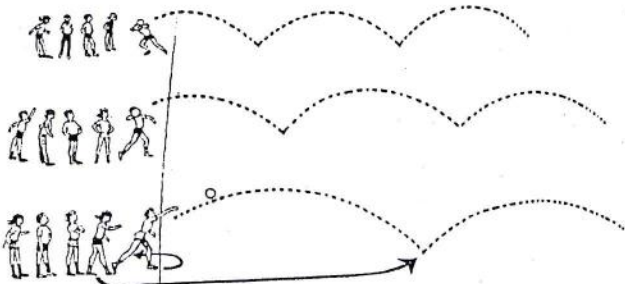
STAGE (1) RUDIMENTARY THROWING ACTIVITIES



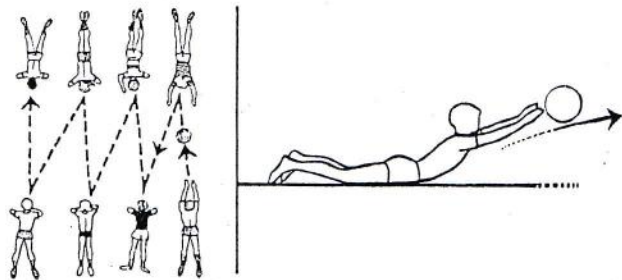
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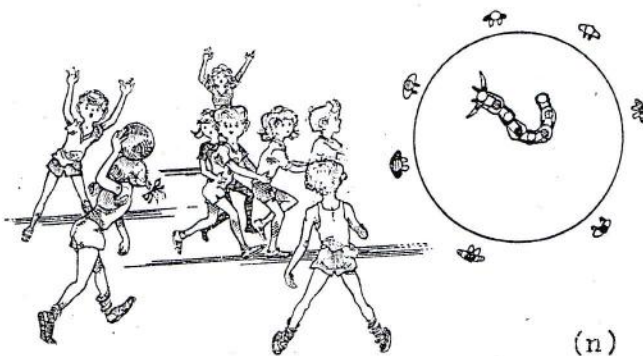
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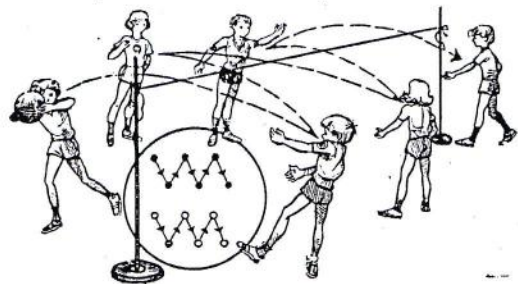
(l)



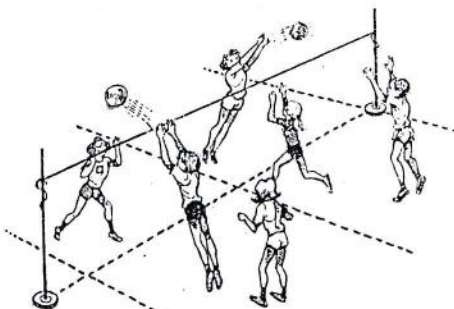
(m)



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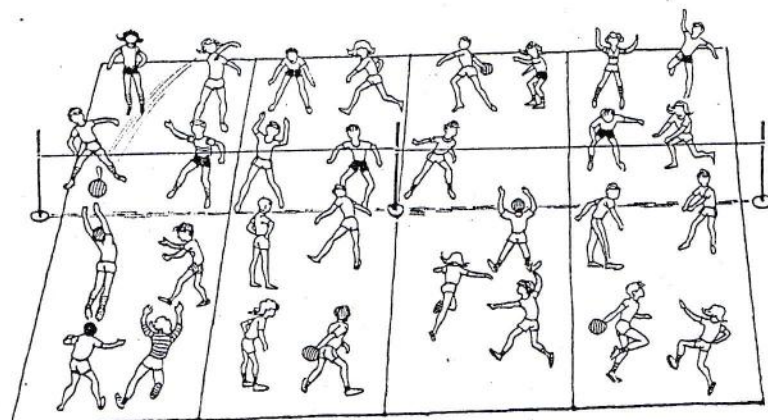


(o)

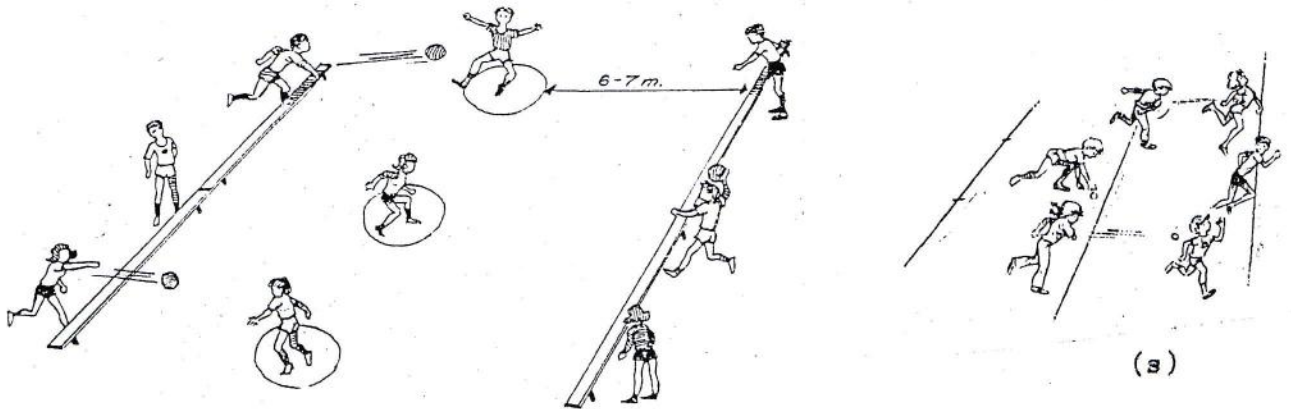


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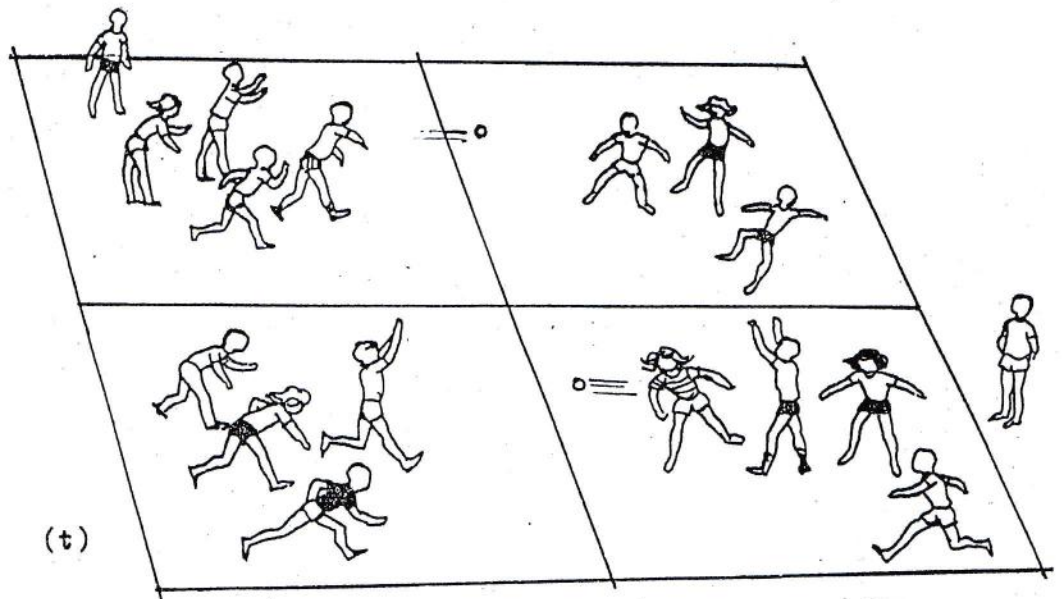
(q)



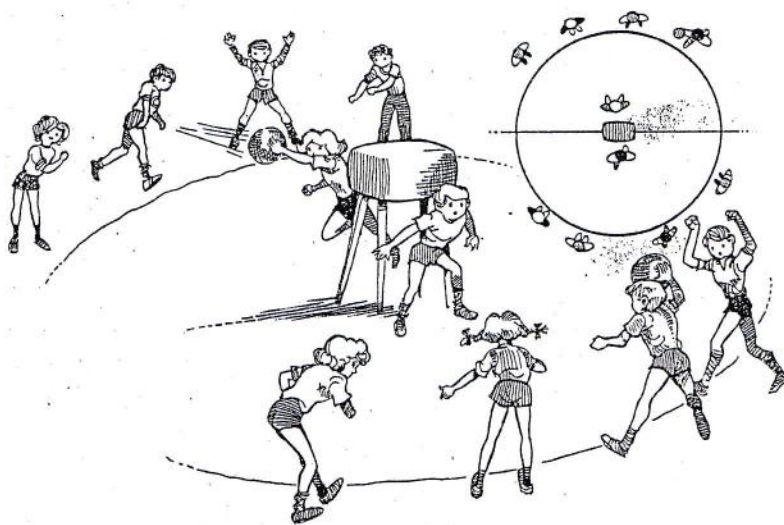
STAGE (1) RUDIMENTARY THROWING ACTIVITIES



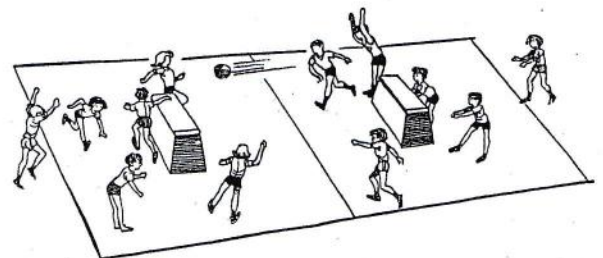
(r)



(t)



(u)



(v)

## GROUP THROWING GAMES

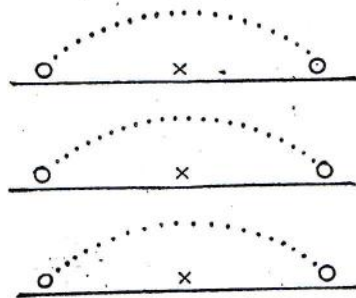
The following are suggestions for games involving throwing activities. It will be up to the Teacher or Coach to decide the dimensions of the area to be played on; the size and type of ball used; the size of the team(s); and the interpretation of the rules. It is essential that the Teacher and Coach ensure maximum participation and the team members safety at all times

### KEEP THE BALL MOVING

Athletes arrange themselves in groups of 5 or 6 with a small ball or football. On a given signal they move about speedily in a variety of directions passing the ball to each other. All athletes must receive the ball thus ensuring team involvement

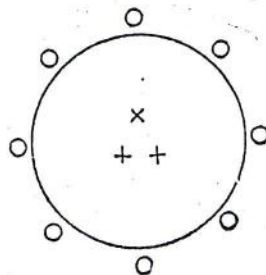
Two or three athletes could be chosen to intercept the ball and a points system could be devised for the number of passes and the number of interceptions achieved. The role of the athletes can be rotated as appropriate

### INTERCEPTING IN THREES



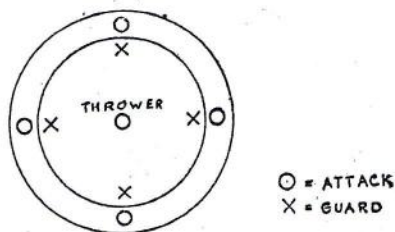
The athletes arrange themselves into 'three's' with one in the middle. A ball, preferably a tennis ball, is thrown by and to the two outside athletes. The athlete in the middle tries to intercept. If the ball is caught, the athlete who threw the ball, comes into the middle. The game becomes more vigorous when the two outside athletes run and dodge to pass the ball to each other

### WANDERING BALL



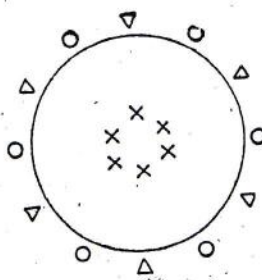
Athletes form a circle with one or more in the middle. A bean bag is thrown from athlete to athlete with those in the middle trying to intercept. When caught the thrower and catcher exchange positions

CIRCLE PASS OUT



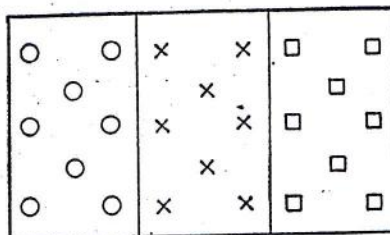
This is a practice for attack and defence. A central thrower attempts to throw a ball to the athletes on the outside of the circle whilst those on the inside try to intercept. The three roles are all changed after a period of time

TEAM DODGE BALL



Depending on numbers more than one of this activity can be started at the same time. The team is divided into two, or as practical. One half of the team is positioned within the circle and the other on the outside. One or more balls are used by those outside the circle to hit those inside who naturally take evasive action. They may not leave the circle but when hit take a position outside the circle and help with the throwing. The last person in the circle is the winner and teams are rotated

THREE COURT DODGE BALL



The ground is divided into three equal courts as in the diagram and the team divided into three each of whom occupy a court. The teams in the two outside courts use a ball with which they try and hit the members of the team in the centre court who naturally take appropriate evasive action. Each time an athlete is hit it is a point against them. The teams are rotated and the team with the least number of strikes or points against them are the winners

GAINING GROUND

Using a football or medicine ball appropriate to the age of the athlete and playing across one-third of a netball court use teams with four to five a side. This can be enlarged to six to eight over the penalty area of a football pitch. The object is to throw the ball over the other teams line. Turns are taken in throwing from the point where the balls land

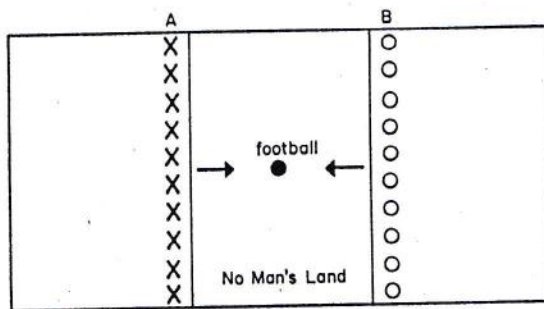
TARGET THROWING

Using tennis balls or bean bags throw at targets such as skittles, cones, cricket stumps or tin cans placed some 10-15m away

THROWING AND CATCHING WITH A PARTNER

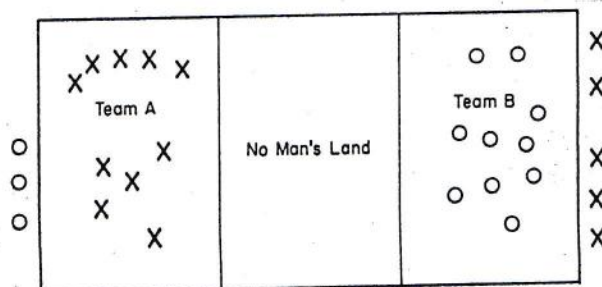
Place the athletes in pairs with one tennis ball and see which pair can stand the furthest away, throw the ball at each other and still catch it

PUZZ BALL



Teams of six to ten athletes armed with playballs face each other across 'no mans land' ie centre of a badminton court. A football is placed in the middle. Using the playballs the athletes drive the football over their opponents line. The football cannot be touched. With large teams certain athletes can be designated as 'retrievers' collecting the balls when thrown and passing them back to the throwers. The athletes are rotated so everyone gets a turn

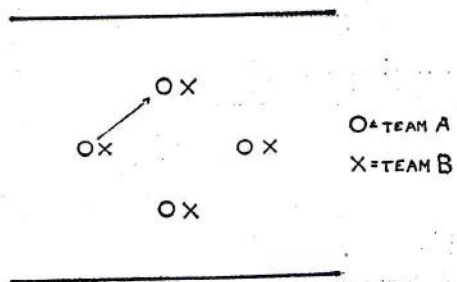
KNEE BALL



Using a badminton court the two teams face each other across 'no mans land'. Each have a playball or medium sized rubber ball (smaller than a football) and the object is to simultaneously throw the ball and strike a member of the opposing team below the knee. Once struck the athlete must take up the position behind the opposing team. They are still involved in the game being required to retrieve the ball

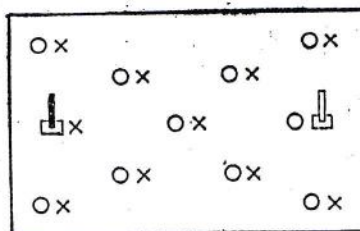
and throw it at the opposition to eliminate them. Team A can throw the ball to their team members behind the opposition if they wish. Teams must stay within their sectors and must not stand on or cross the line

TEAM PASSING



Starting with small teams divide the athletes in half or into as many groups as is practical. Team A tries to keep passing the ball between them and Team B marks their individual athletes at the same time trying to intercept the ball. The Team with the largest number of passes wins. Teams can then be made bigger and the game played over a larger area of ground

POSTBALL

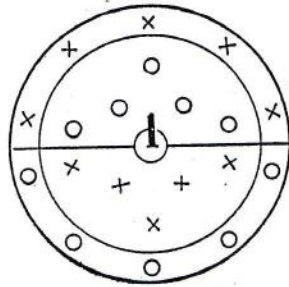


Two teams are set up and an area marked. At either end are targets ie skittles, cricket stumps, tins etc. Members of the teams mark each other with one member defending the target. The ball is passed to each member of the team with the opposition trying to intercept. Athletes may not run or hold the ball for more than 3secs. The object is to hit the opposing target with the ball

BASKETBALL

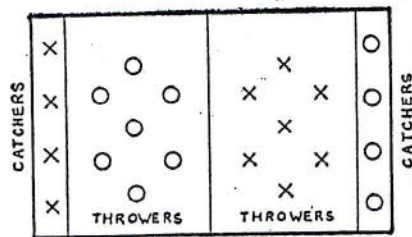
An appropriate ball may be used on a basketball court. Smaller teams may have 5 to 7 athletes on a side or as many as 11. The normal rules of basketball are adopted. It may be dribbled with one hand but as soon as it is touched with two the athlete must 'shoot' for goal or pass to another player. The ball may not be held for more than 3secs. As much passing and shooting must be encouraged as possible

CIRCULAR PILLAR BALL



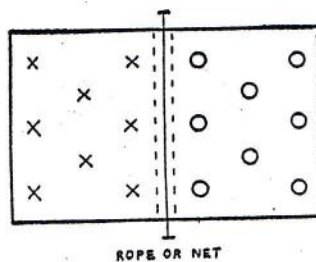
A target is placed in the centre of a circle some 40m in diameter or as appropriate. The circle is divided in half. The teams are divided up as shown in the diagram above. The athletes must remain in their designated areas. With a suitable ball one team tries to knock over the target whilst the other defends it. Tactical passes are made to and from members of the same team from inside the circle to the outer circle and vice versa

END BALL



The playing area is marked out as appropriate and to the size of the team as in the diagram above ie a suggestion might be 30m x 40m. Throwers and catchers are nominated and placed in the manner shown above. A ball is thrown into the centre. The throwers try and throw the ball to their catchers. It must not bounce and none of the team members must come out of their designated area. Once the ball has been caught it is thrown back to that teams 'throwers'. If a penalty is allowed then the ball is given to the opposing team. The team with the largest number of 'catches' wins

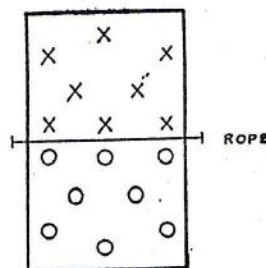
NEWCOMBE



An area 30m x 50m is marked out with a badminton net or rope stretched across the centre of the court and a 3m neutral area on either side of the net as in the diagram. Athletes divide into

two teams of 8-10 a side. The server starts at his base line and throws the ball attempting to strike the ground in the opposition's court without landing in the neutral space. The opposing team members try and intercept the ball and return it over the net as before. A point is scored when the ball touches the ground in the oppositions half of the court. The ball must be thrown over the net but may be passed between athletes on the same side. An open palm can only be used. Once the ball has been caught the athlete must throw it from that position. He may not run with the ball. Variations to the game may include a heightening of the net and adopting the rule that only the serving team may score

### VOLLEYBALL

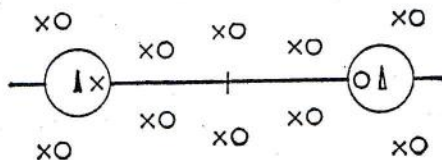


A court is marked out 50m x 30m with teams of 6 to 8 athletes per side. A large rubber ball or football is used and the normal rules of volleyball adopted. The server may have two serves if the first fails, the ball is always batted and never caught and may be hit by the same athlete on his side three times but on the third must pass over the net. The three strikes on the one side can pass between three athletes. Scores are made in the usual manner by only the serving side

### HANDBALL

Over an appropriate area according to the size of the teams the game is played under the rules of Association Football with the ball being hit with the flat of the hand. The ball may not be thrown, scooped or carried nor may it travel above shoulder height. Variations to the rules can be made as the Teacher or Coach sees fit

### SKITTLE BALL



A line is drawn down the centre of the ground and can be 40m to 70m in length. At either end of the line is a circle 5m to 8m in diameter in the middle of which is a skittle. The line is continued 5m to 10m beyond the circles. A penalty mark is sited halfway down the line as in the diagram. Using a football two teams are divided equally on either side of the line with a skittle defender within the circle. The ball is passed between player with the object of knocking down the opposition's skittle. It

is not permitted to kick the ball, run with it, hold it for longer than 3secs, cross the centre line or enter the skittle circle

### LONG BALL

This is a form of rounders on an ordinary pitch. One side fields whilst the other bats using a short rounders bat and a tennis or rubber ball. It will be left to the discretion of the Teacher or Coach to establish the number and position of the bases. The serve is made underarm. To run out the batter he will have to be hit with the ball or the ball is returned to either basemen or the homebase in advance of the batter. He can also be caught as long as the ball does not touch the ground first. A number of adaptations can be introduced

### STINGERS

A tennis ball is used and the athletes stand in a circle with their legs apart their feet touching that of the next athlete. The ball is thrown into the centre and then punched and pushed through one of the athletes legs. That athlete is 'on' and may run with the ball, throw and hit a selected athlete, the two of them are then 'on' and the process continues until one athlete is left

### General Comment

The above are a number of suggestions which can be improved, refined and adapted to the particular class situation. It should also be remembered that such sports as tennis, cricket, volleyball, basketball, softball, baseball and many others are all good arm exercises. They could be introduced into a less formal games type situation by changing the equipment, reducing the area of play, the number of players and the rules accordingly

CHAPTER THREE

Stage 2 - Pre-Throwing Activities

Discus/Hammer/Shot Put/Javelin

Illustrations

Throwing Activities

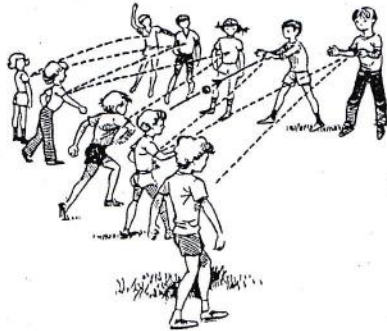
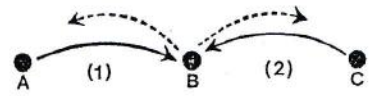
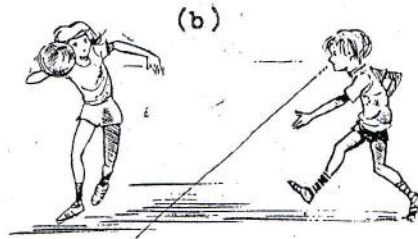
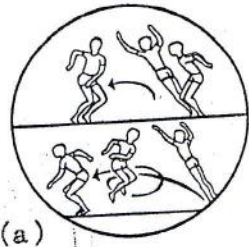
## STAGE (2) PRE-THROWING ACTIVITIES

The following is an explanation of the Pre-Throwing Activities many of which are self-explanatory

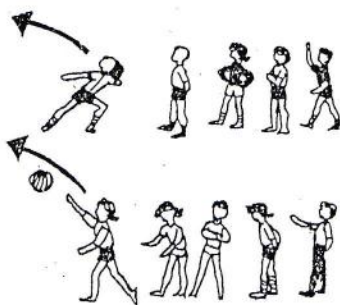
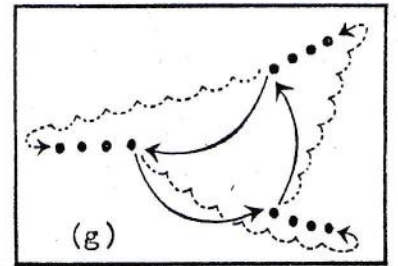
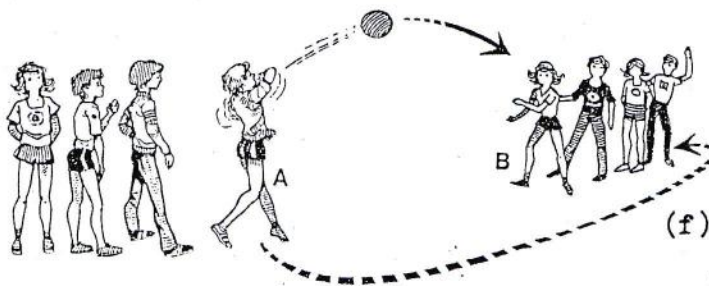
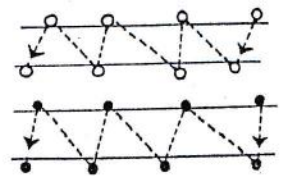
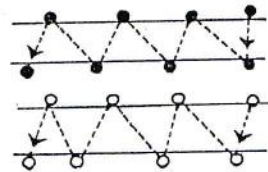
- Fig (a) Jump movement, about turn and rotations etc
- Fig (b) Throwing movements, from one athlete to another
- Fig (c) Teams A and C are continuously fed balls from two athletes standing at B, they do not necessarily throw to the next athlete in sequence. Accuracy is important as is the need to rotate the two athletes standing at B
- Fig (d) Athletes, in a team, throwing one at a time on the instruction of the Teacher
- Fig (e) Two teams face each other and using one ball throw it to each other, in sequence, up and down the line. Different balls and a variety of throwing actions can be used
- Fig (f) This is a variation of Fig (e) and is self explanatory
- Fig (g)
- Fig (h) This is a variation of Fig (d) to be used indoors
- Fig (k) against the wall of the gymnasium
- Fig (i) A form of Longball, throwing and catching with the emphasis on accuracy
- Fig (j)

The various activities illustrated for DISCUS - HAMMER - SHOT  
PUT - JAVELIN are self explanatory

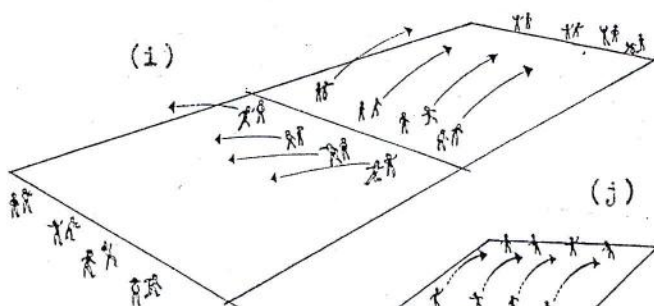
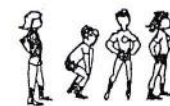
STAGE (2) PRE-THROWING ACTIVITIES (CLASS/GROUP SITUATIONS)



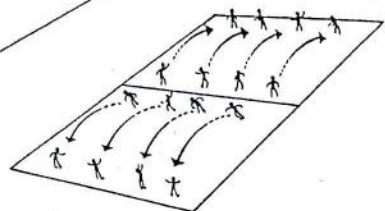
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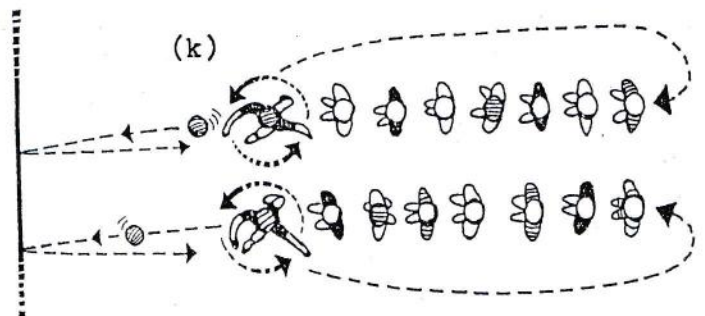
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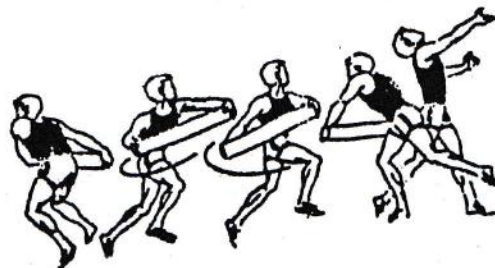
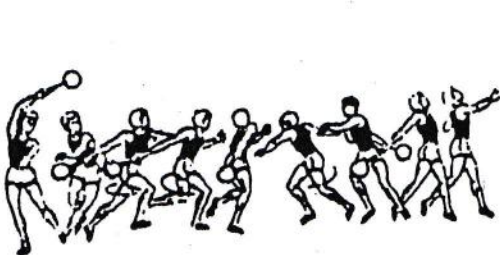
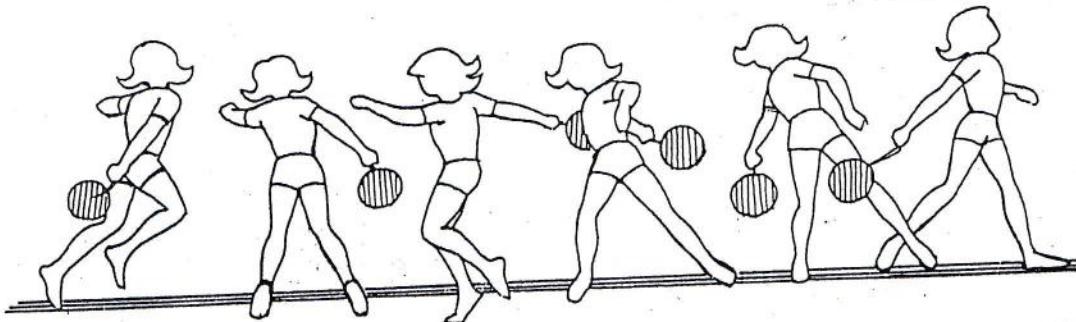
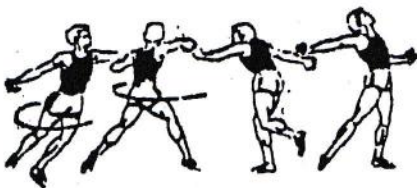
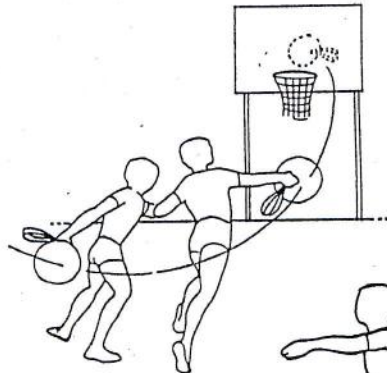
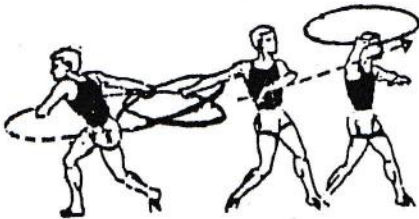
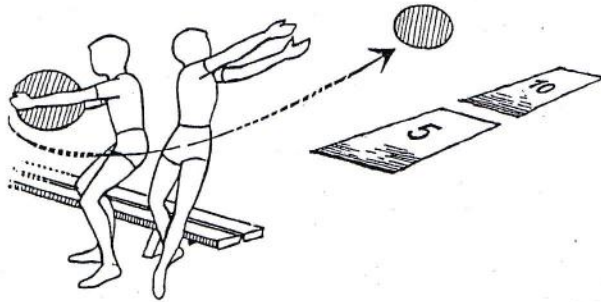
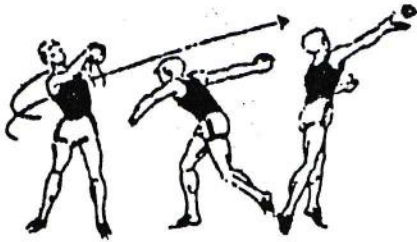
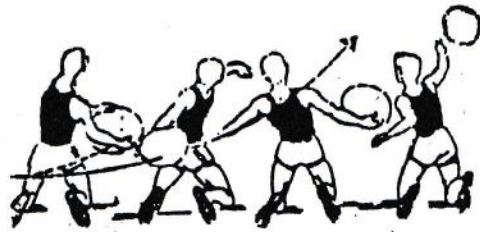
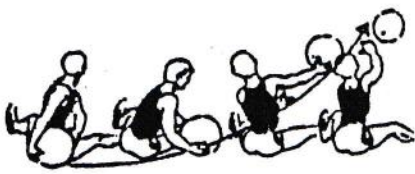
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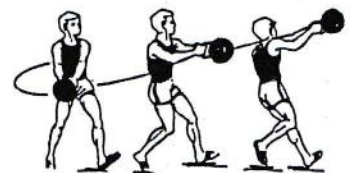
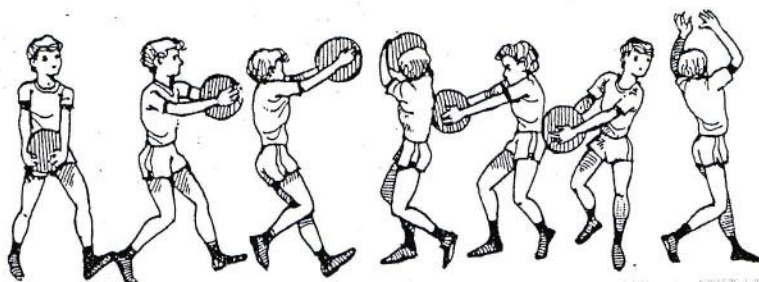
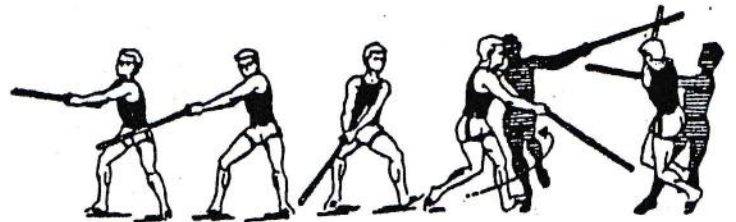
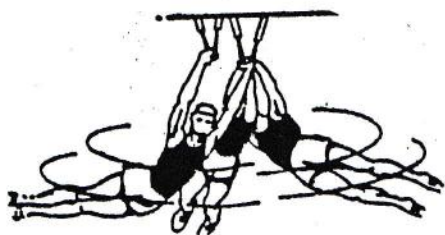
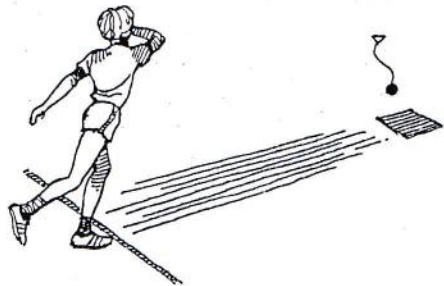
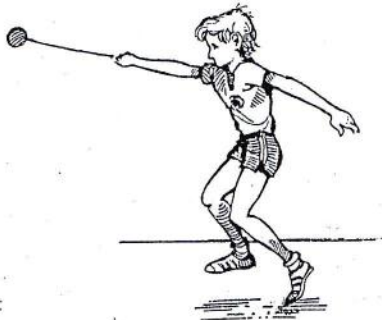
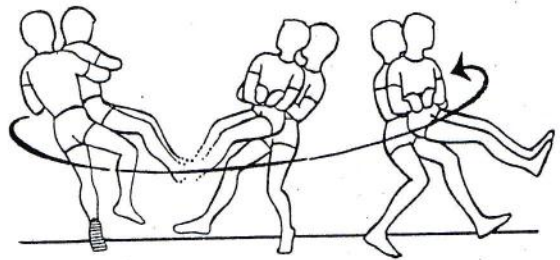
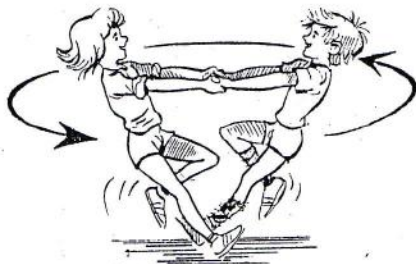
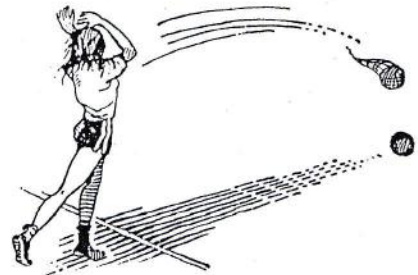
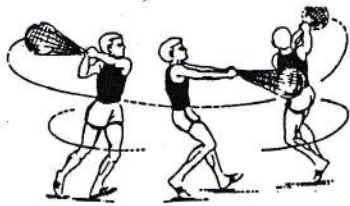
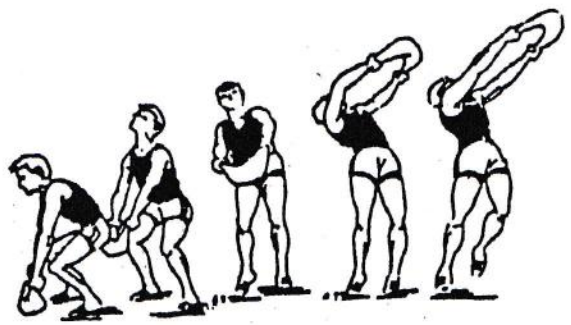
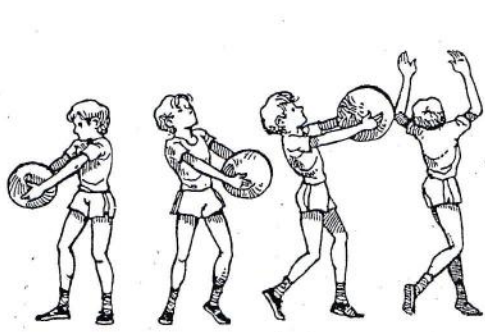
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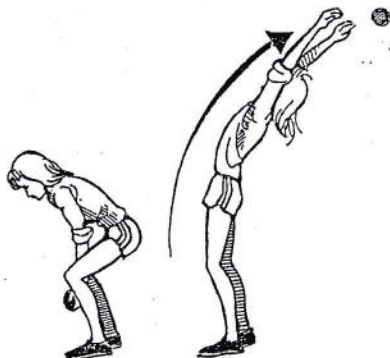
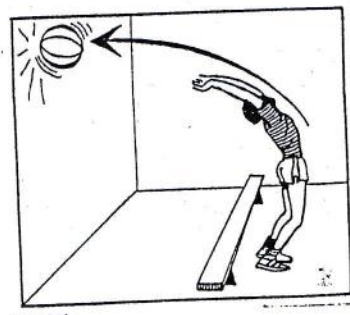
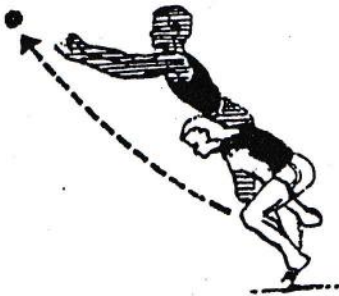
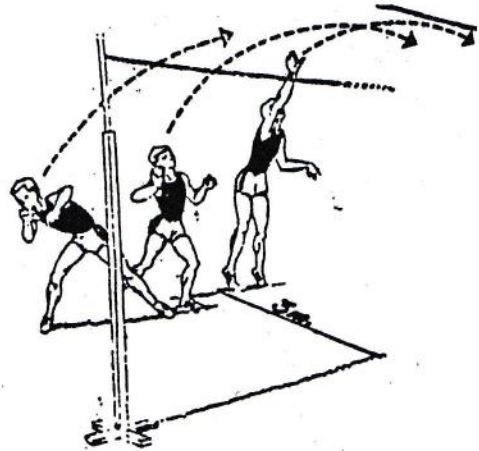
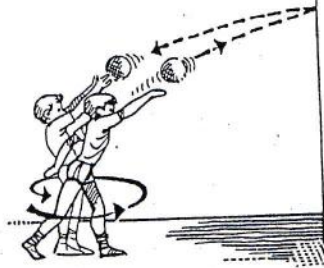
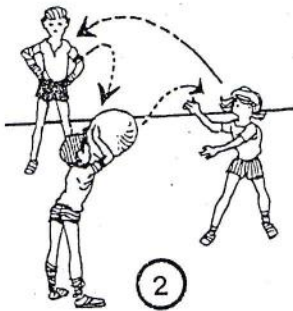
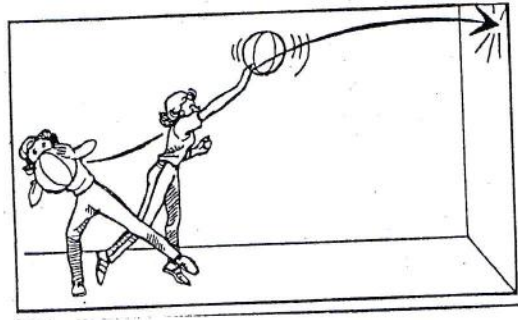
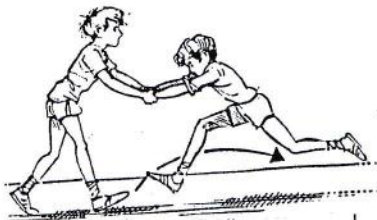
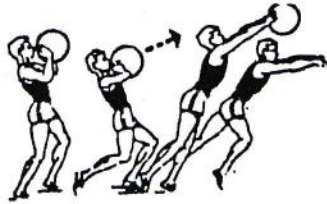
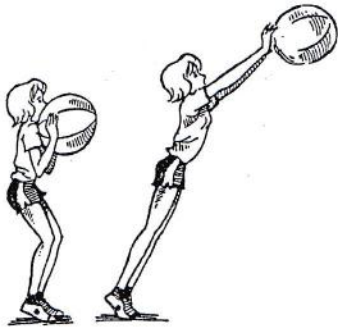
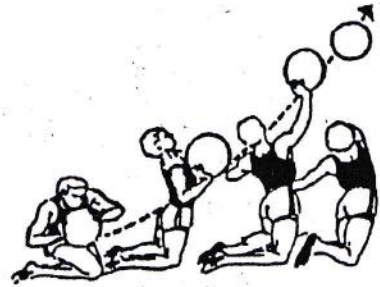
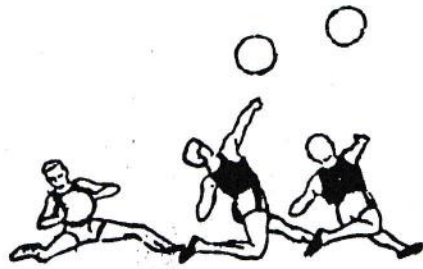
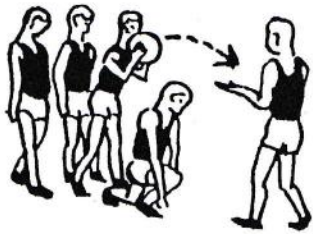
STAGE (2) PRE-THROWING ACTIVITIES (DISCUS)



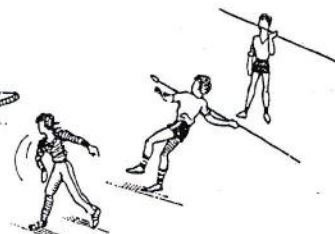
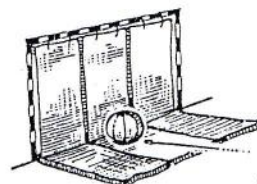
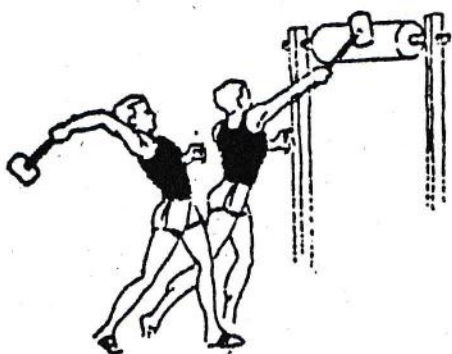
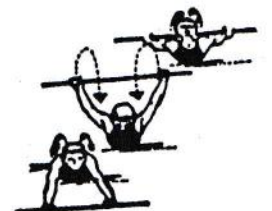
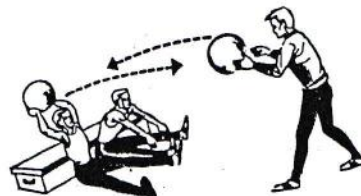
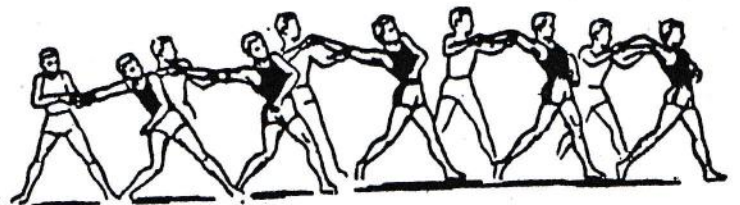
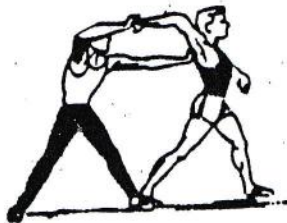
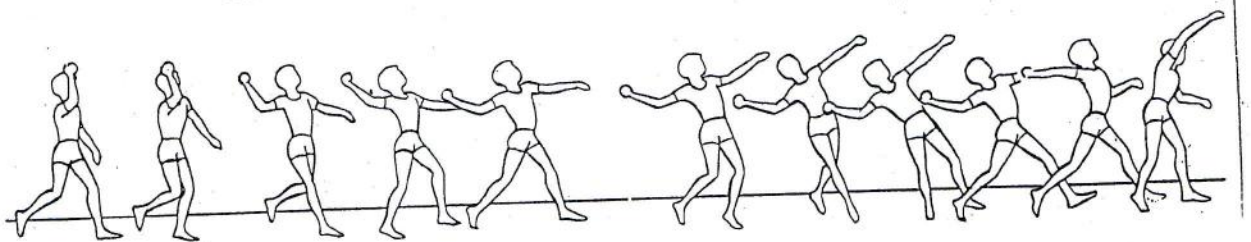
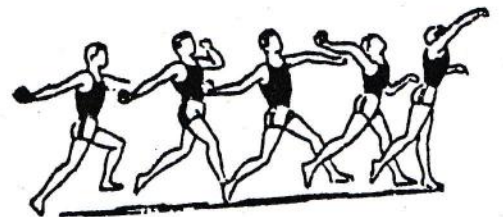
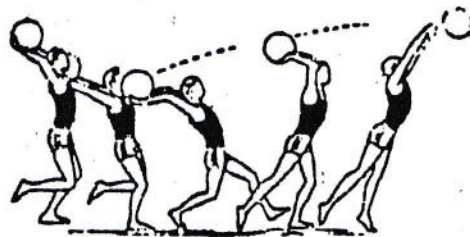
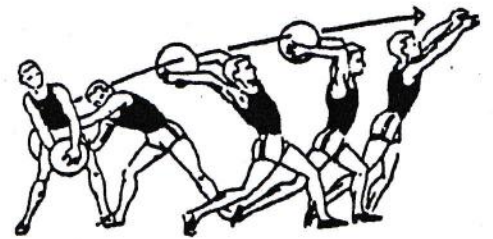
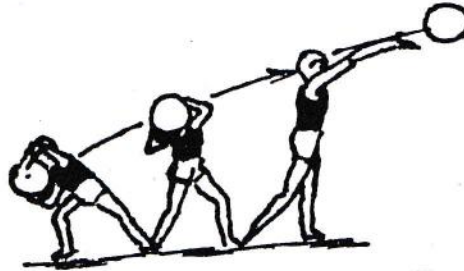
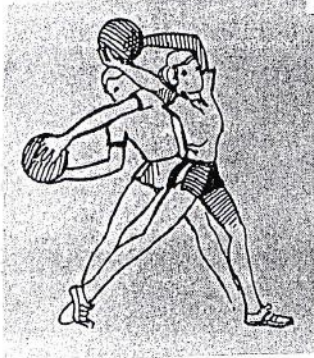
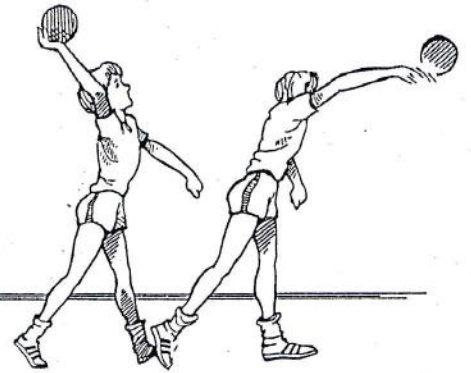
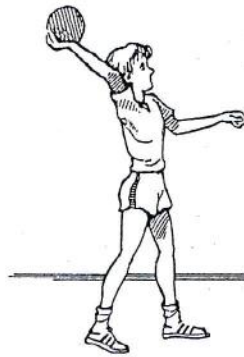
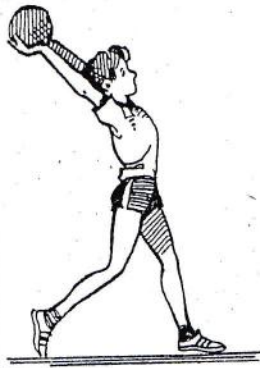
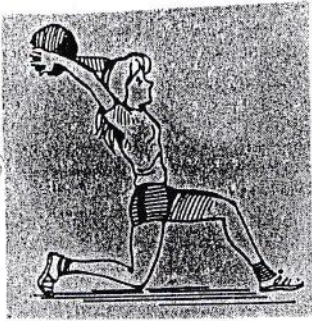
STAGE (2) PRE-THROWING ACTIVITIES (HAMMER)



STAGE (2) PRE-THROWING ACTIVITIES (SHOT-PUT)



STAGE (2) PRE-THROWING ACTIVITIES (JAVELIN)



## THROWING ACTIVITIES

The following are a variety of suggestions for throwing activities which can be implemented in any of the four stages or stage of development. The age groups given are flexible and can be adjusted to suit the Teacher or Coach

### 7 to 9 year olds

#### Throws from Stationary Position

One-handed small ball throw

Two-handed large ball throw

(a) Forwards underarm

(b) Backwards overhead

Two-handed Soccer throw-in

Seated Soccer throw-in

One-handed hoop sling

One-handed quoit sling

Seated large ball sling

#### Throws on the Move

One-handed small ball throw

Two-handed Soccer throw-in

### 9 to 11 year olds

#### Throws from Stationary Positions

One-handed small ball throw

Two-handed large ball throw

(a) Forwards underarm

(b) Backwards overhead

(c) Backwards over left shoulder

(d) Backwards over right shoulder

Two-handed Soccer throw-in

Schwanbek throw

One-handed hoop sling

One-handed sling-ball sling

Seated large ball sling

Seated putt

Standing putt

#### Throws on the Move

One-handed small ball throw

Two-handed Soccer throw-in

Hoop sling from a jump-turn

Sling-ball sling from a jump-turn

11 to 13 year olds

Throws from a Stationary Position

One-handed small ball throw

400gm Javelin throw

Two-handed large ball throw

(a) Forwards underarm

(b) Backwards overhead

(c) Backwards over left shoulder

(d) Backwards over right shoulder

Two-handed Soccer throw-in

Schwanbek throw

One-handed hoop sling

One-handed sling-ball sling

$\frac{1}{2}$ kg Discus throw

2.72kg Shot Put

Throws on the Move

One-handed small ball throw

400gm Javelin throw

Two-handed Soccer throw-in

Schwanbek throw

Hoop sling from a jump-turn

Sling-ball sling from a jump-turn

$\frac{1}{2}$ kg running-front Discus throw

2.72kg Shot Put

Jump-turn, two-handed throw over left shoulder

Jump-turn, two-handed throw over right shoulder

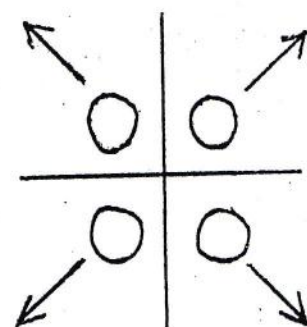
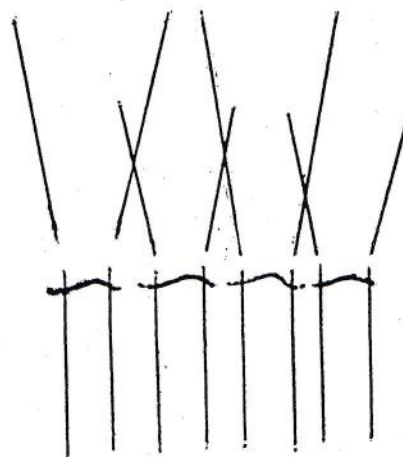
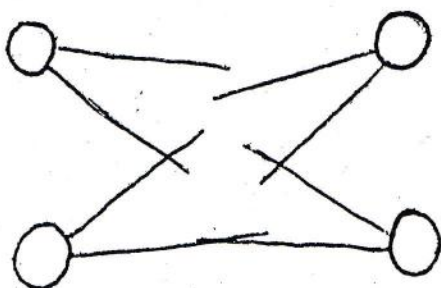
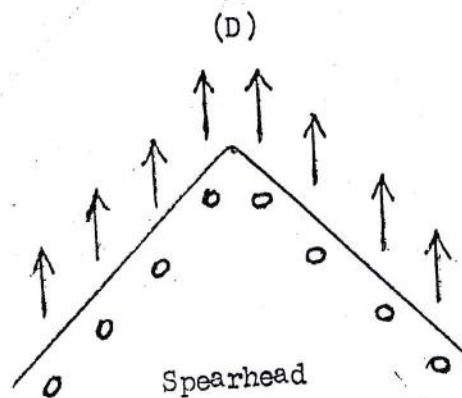
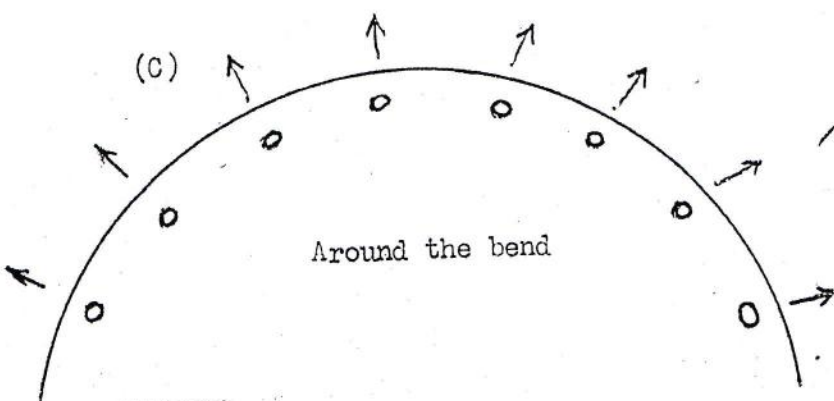
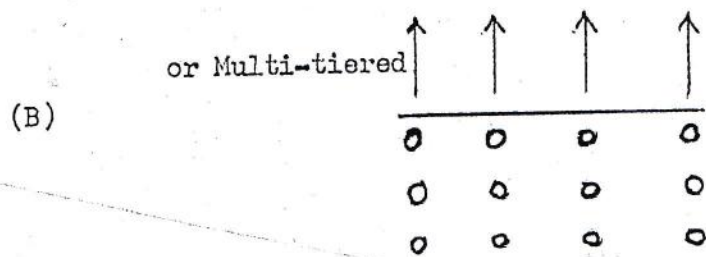
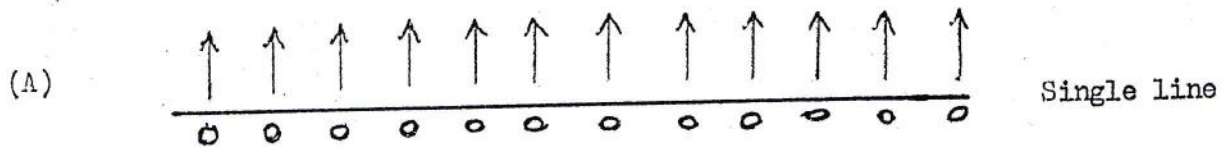
CHAPTER FOUR

Stage 3 - Fundamental Throws

Structure of Classes

Measurement of Throws

STAGE (3) FUNDAMENTAL THROWS (STRUCTURE OF CLASSES)



Rotational throws - 5 - 8m between throwers  
 Linear throws - 3 - 5m between throwers

Figs C - D  
 Figs A - B

Left handed throwers on the left hand side of group.

Further suggestions for more gifted throwers

Figs E F G

## MEASUREMENT OF THROWS

The athletes will be very enthusiastic to know how well they are throwing in relation to their colleagues. In view of the structure of the classes in this Stage measurement is a relatively easy task. It can be done in any of the following ways

Squares of white card on long nails  
Small tins with weighted cement bases  
Old badminton shuttlecocks weighted with plastecine

Marking the throwing area every 5 or 10 metres

A long tape pegged at the throwing point and stretched out into the throwing area for speedy measurement to within one metre

Two people holding the tape and measuring each throw

CHAPTER FIVE

Throwing Area Dimensions

The Rules in the Throwing Events

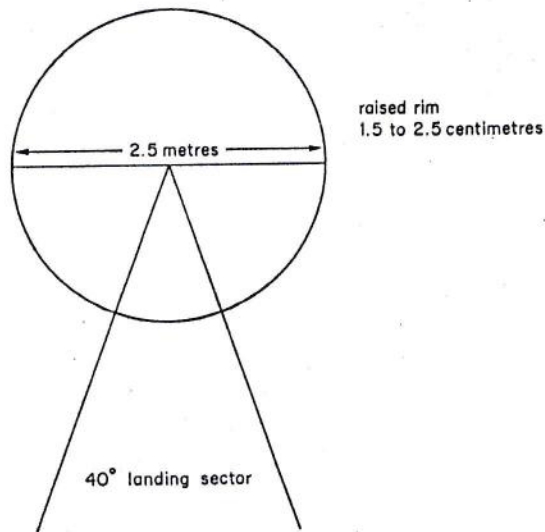
Improvised Equipment for the Throwing Events

Specifications for the Throwing Implements

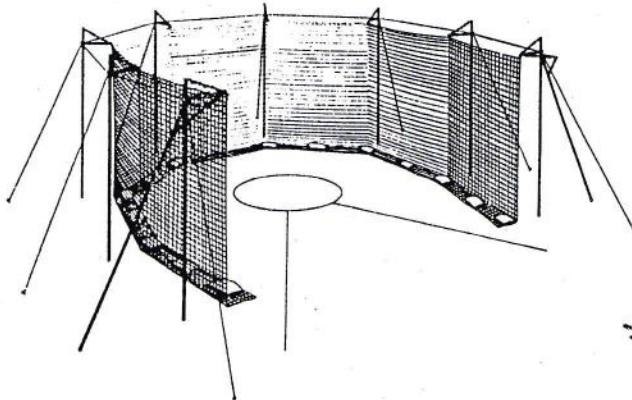
## Throwing Area Dimensions

### Discus

Layout of the Discus Circle



Layout of the Discus Cage

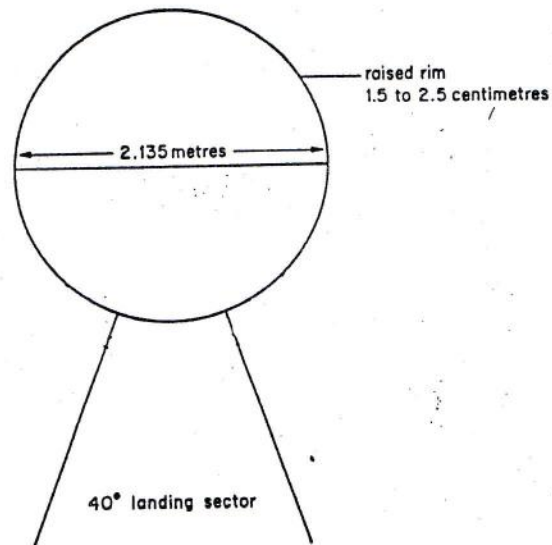


The inner edge of the cage should be 3.0m from the centre of the circle. It should be 4.0m in height with the opening into the sector, from upright to upright, 6.0m apart

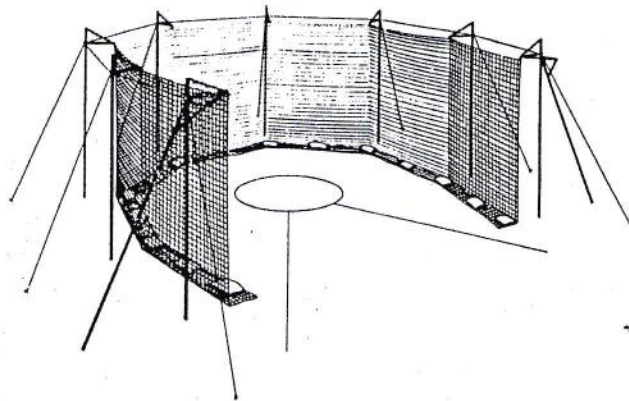
The line of the two outer edges of the cage should extend out into the throwing sector as in the diagram. They should be constructed in such a way that the distance from the centre of the circle to a point exactly halfway between the two furthest uprights is 5.0m

## Hammer

Layout of the Hammer Circle



Layout of the Hammer Cage

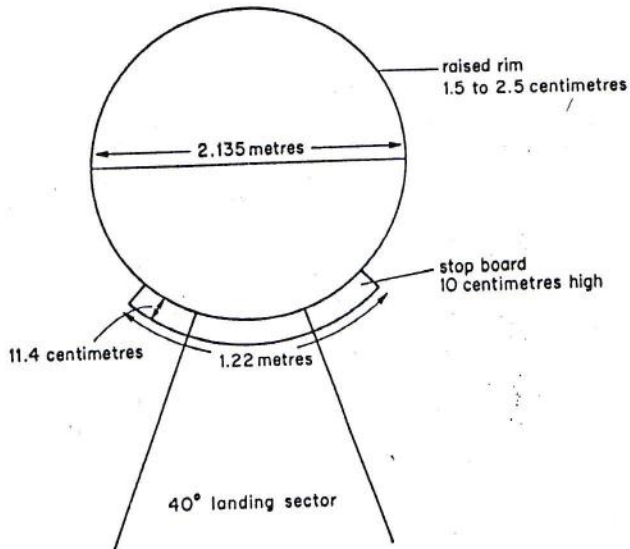


The inner edge of the cage should be 3.5m from the centre of the circle. It should be 5.5m in height with the opening into the sector, from upright to upright, 6.0m apart

The line of the two outer edges of the cage should extend out into the throwing sector as in the diagram. They should be constructed in such a way that the distance from the centre of the circle to a point exactly halfway between the two furthestmost uprights is 4.20m

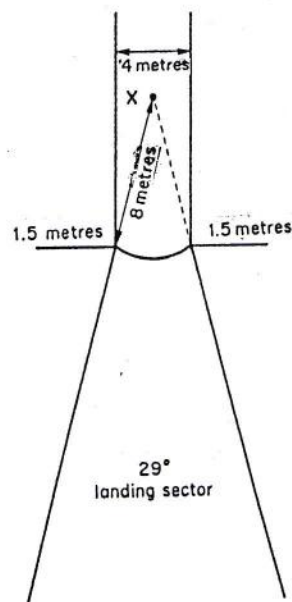
Shot Put

Layout of the Shot Put Circle



Javelin

Layout of the Javelin Run-up



## The Rules in the Throwing Events

1. Each competitor may have from three to six throws; usually all have three and the best six a further three
2. In the event of two athletes throwing the same distance, the second best distance shall decide the position. If that is also equal, the third best decides and so on
3. The measuring point of each implement, once it has landed, is the rearmost point which must be within the defined throwing area
4. The measurement of the throw must be from the point described in No 3 in a straight line to the inside circumference of the circle or scratch line through the centre of the circle or arc
5. Competitors must not touch the throwing line or ground beyond during the course of the throw or afterwards. In Discus, hammer and shot competitors may touch the side of the stop board or inside rim of the circle but not the top of the rim or board
6. A hammer thrower is not penalized for striking the ground or circle with the implement as long as he completes the throw. If, after having so touched the ground, he stops throwing so as to begin the throw again, this shall count as a trial throw
7. A hammer thrower may wear a glove to protect one hand
8. An athlete, having started the movement of throwing, may stop, put down the implement, walk out of the area and start again
9. The athlete must only leave the the circle or run-up once the throw has landed
10. In javelin the athlete must leave the run-up area from behind the throwing line or its extension
11. In the shot the implement must be pushed from the neck and must not be withdrawn from the neck prior to throwing
12. All throws are delivered one handed with the exception of hammer
13. In javelin no unorthodox methods are allowed ie rotational slinging
14. In javelin the tip must land first but does not have to stick in

## Improvised Equipment for the Throwing Events

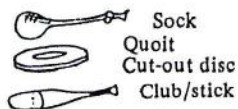
It is essential here to ensure that there is a wide enough selection of implements so that the athlete can select that which best suits his or her individual needs. Fitting the implement to the athlete is the best policy and ensures that the best chance is given for the correct learning of the skill. With this in mind the following equipment could be used within the teaching environment according to age and ability

2.72kg and/or 3.25kg shot  
 0.75kg discus  
 400gms javelin  
 Medicine balls  
 Slingballs  
 Rubber shot  
 Rubber discoid  
 Rounded stones (for shot)  
 Plastic balls  
 Socks or tights filled with sand or scrap metal etc  
 Quoit or hoop  
 Wooden discoid  
 Dowelling or bamboo with plastic hosepipe grip for javelin  
 Light hammers  
 Short handle hammers  
 Chain hammers

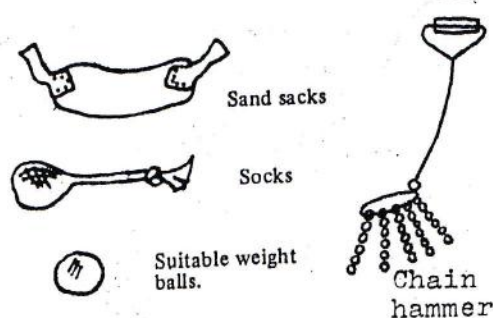
In whatever method is used to construct these items of throwing equipment safety must always be the ultimate factor. It would also be helpful to ensure that each implement is colour coded indicating the weight

Care must be taken over all equipment irrespective of whether it is improvised or not. It should be checked regularly, maintained in good working order, repaired when necessary, replaced and be kept in a safe, secure and orderly manner

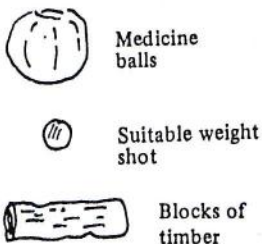
### Discus



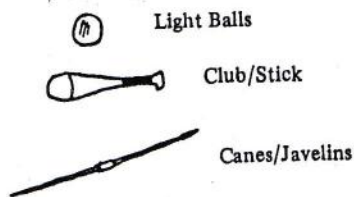
### Hammer



### Shot Put



### Javelin



Specifications for Throwing Implements

The following is a list of standard weight categories for the various age groups required in Competition

Ages	MALES				FEMALES		
	<i>Under 15</i>	<i>Under 17</i>	<i>Under 19</i>	<i>Adult</i>	<i>Under 15</i>	<i>Under 17</i>	<i>Adult</i>
SHOT	4.0kg	5.0kg	6.25kg	7.26kg	3.25kg	4.0kg	4.0kg
DISCUS	1.25kg	1.5kg	1.75kg	2.0kg	1.0kg	1.0kg	1.0kg
JAVELIN	600gms	700gms	800gms	800gms	600gms	600gms	600gms
HAMMER	4.0kg	5.0kg	6.25kg	7.26kg			

CHAPTER SIX

Skill Throwing

Discus

Hammer

Shot Put

Javelin

## STAGE (4) SKILL THROWING

### DISCUS

Discus is a rotational slinging event. Distance in the initial stages will be achieved largely through speed of movement with the implement being released at about 40 degrees

The event should be taught in the following stages

1. The Grip
2. The Release Drills
3. The Standing Throw and Flighting Drill
4. The Turn
  - Sideways Shift
  - Front Running Rotation
  - 1½ Turns
  - 1¼ Turns
5. The Full Turn

#### Step 1 - The Grip

In the case of a right handed thrower the discus should be supported with the left hand placed under the implement. The fingers of the right hand should be spread evenly over the top with the first joint of the fingers over the rim of the discus. The discus should not be gripped. See Fig 1 below

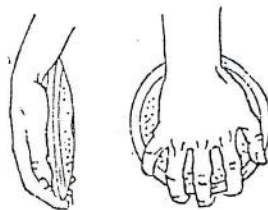


Fig 1

#### Step 2 - The Release Drills

With a right handed thrower the discus is released and spins in a clockwise direction. To ensure that this in fact happens the following drills can be practised

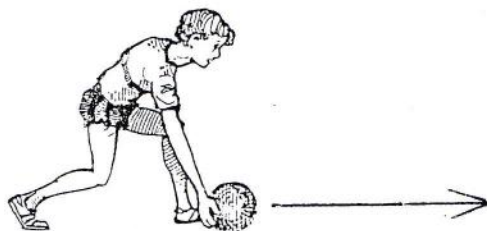


Fig 2



Fig 3

In Fig 2 place the left foot, shoulder width apart, in front of the right. Hold the discus in the correct grip, then withdrawing the implement straight back past the right hip, release it in a forward rolling movement. The discus should roll in a straight line in a clockwise motion

This drill should be immediately followed by the 'underarm bowl' as in Fig 3. The position of the feet is the same as is the grip. The Discus is withdrawn and then released in an underarm bowling action firstly for height and secondly for distance

### Step 3 - The Standing Throw and Fighting Drill

The feet should be placed roughly shoulder width apart in the offset position ie toes of the left foot in line with the heel of the right foot. See Fig 4

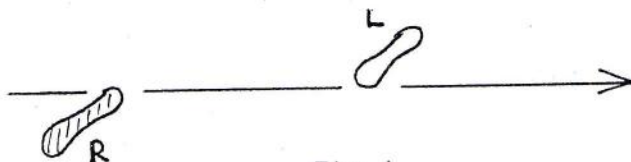


Fig 4

Support the discus with the left hand with the right arm in the forward position. Releasing the left hand withdraw the implement to a position behind the right shoulder with the chin - knee - toe in alignment with the right leg. Without stopping, otherwise the discus will fall from the hand, initiate the slinging action. The whole action must be balanced and initiated by the vigorous action of the right hip turning to the front and the right arm remaining fully extended throughout. See Fig 5

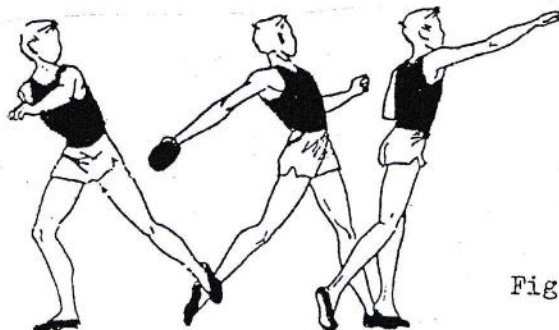


Fig 5

It is important, at this stage, that some practice be devoted to flighting the discus properly. The implement should be spun off the index finger in roughly the direction of the thumb. The angle of release should be about 40 degrees. See Fig 6



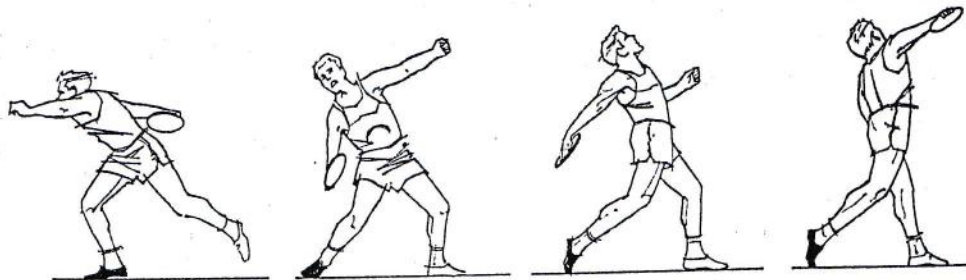
Fig 6

#### Step 4 - The Turn

Throwers need to develop confidence prior to attempting a turn. A useful introduction to this is the 'Sideways Shift' or 'Cross Step' with the athlete standing side on to the direction of the throw. With the discus withdrawn a comfortable distance behind the right hip the movement is initiated by the right leg starting a sideways or side stepping movement bringing the athlete into the previously described standing throw position. See Fig 7



Fig 7



The athlete should then progress to the 'Front Running Rotation' as in Fig 8 hereunder. With the left foot forward, the movement is initiated by withdrawing the discus straight back. Moving forward in the direction of the throw the right foot is placed in a position across the body and to the throwers left. Pivoting on this right foot the thrower performs a 2-stride running rotation arriving in the position described in the standing throw position. The athlete should avoid jumping into this position

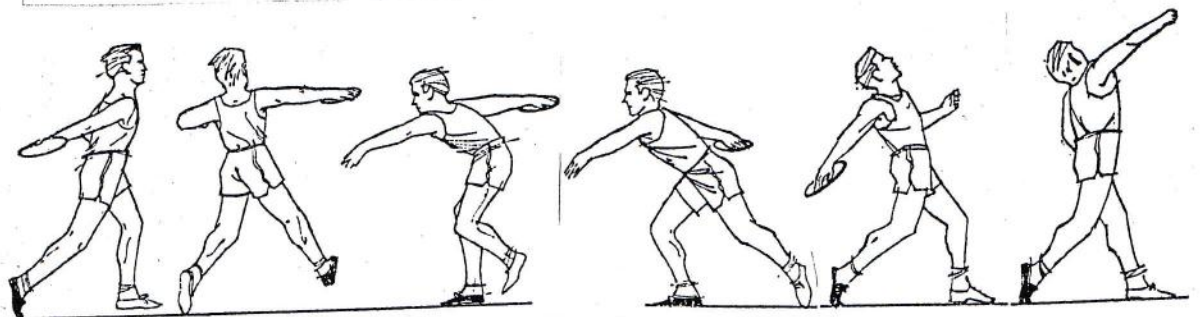


Fig 8

The object now is to slowly turn the thrower away from the direction of the throw when in the starting position. This can be started by teaching the  $1\frac{1}{2}$  Turns as in Fig 9. Stand with feet shoulder width apart and 90 degrees from the direction of the throw. Withdraw the discus and open the left leg by pivoting on the ball of the left foot. The movement then becomes the running rotation as described in the last action



Fig 9

Moving to the  $1\frac{1}{2}$  Turns the feet adopt the position as in Fig 10 and the same movements adopted as before

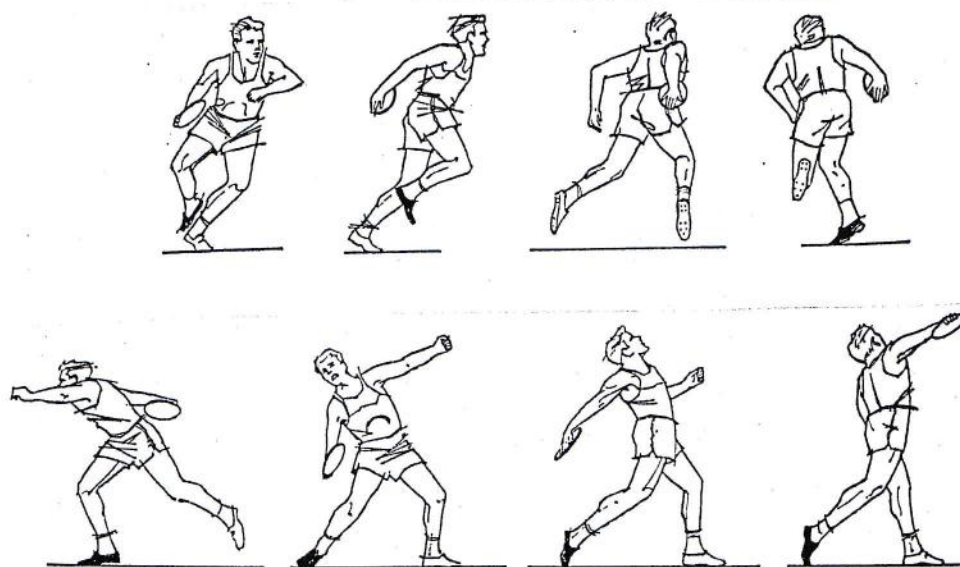


Fig 10

Step 5 - The Full Turn

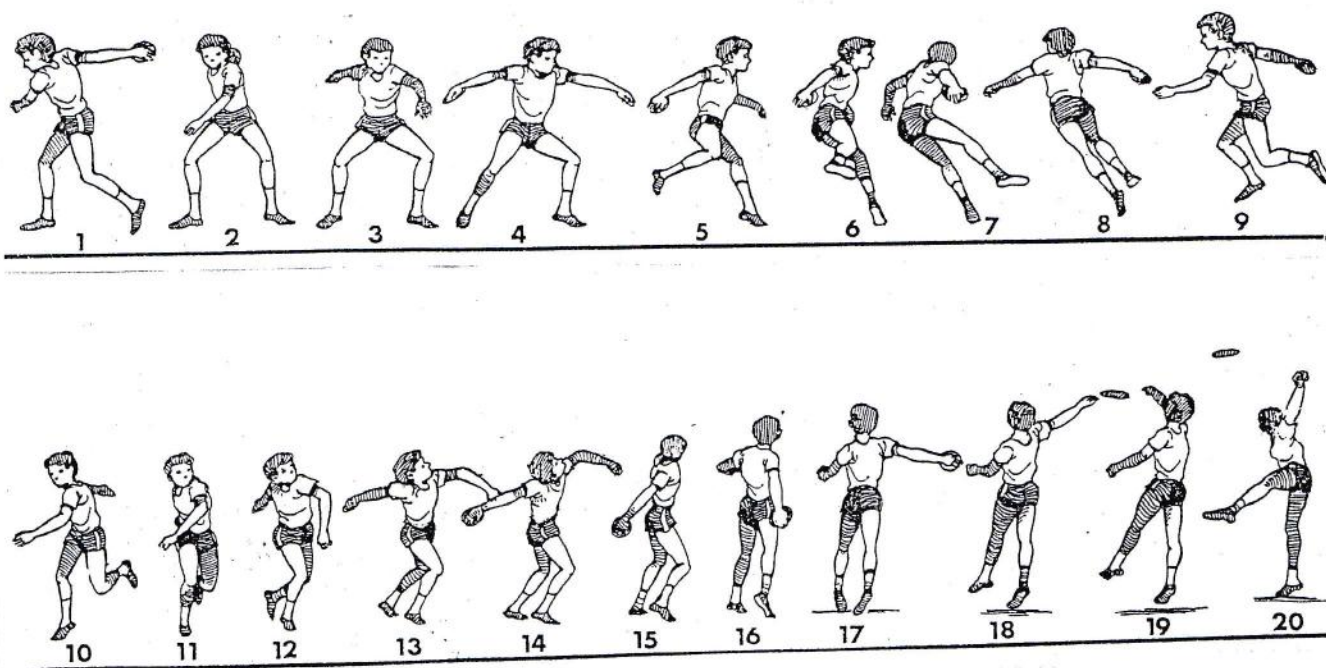


Fig 11

## HAMMER

Hammer, as with discus, is a rotational event executed through a series of swings and turns. Distance is achieved through speed of movement with the hammer being released at roughly an angle of 40 degrees

The event should be taught in the following stages

1. The Hold
2. The Standing Throws
3. The Turns
  - Single Jump Turns
  - Single Turn
  - Two Turns
4. The Three Turn Throw

### Step 1 - The Hold

In the case of a right handed thrower the handle of the hammer is held in the left hand at the base of the fingers. The right hand is placed over the left in the overlap position as shown in Fig 12 and Fig 13

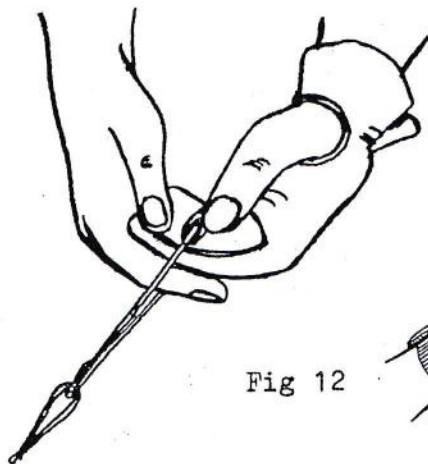


Fig 12

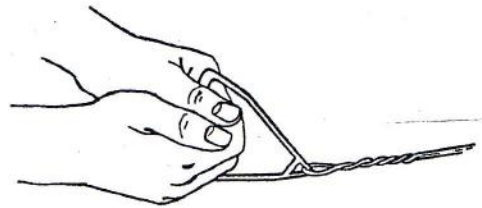


Fig 13



### Step 2 - The Standing Throws

The standing throws can be very effectively taught through the 'Short Hammer Method'. This is done by removing the normal wire from the hammer by untwisting it at its attachment and replacing by either of the following two methods

- (i) Two interlocked 'D' shackles or by
- (ii) a short piece of nylon cord of more than 500lbs/230kgs breaking strain, tied in a knot which will not slip, such as a bowline

See Fig 14 for (i)

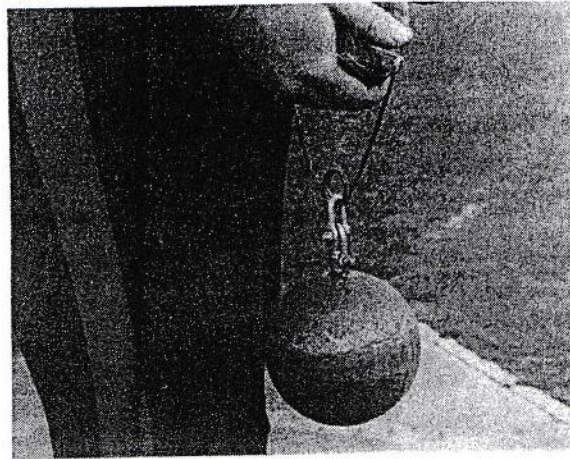


Fig 14

With the short hammer the throw can be taught in the following two sequences

Stand with the back in the direction of the throw and then swing the hammer, starting at the position by the right knee, over the left shoulder. The legs should be comfortably bent. In executing the throw the athlete should pivot on the balls of the feet using the legs in a strong lifting action. The chest is turned to the direction of the throw with the arms finishing in a high overhead position. The whole movement must be balanced. See Fig 15

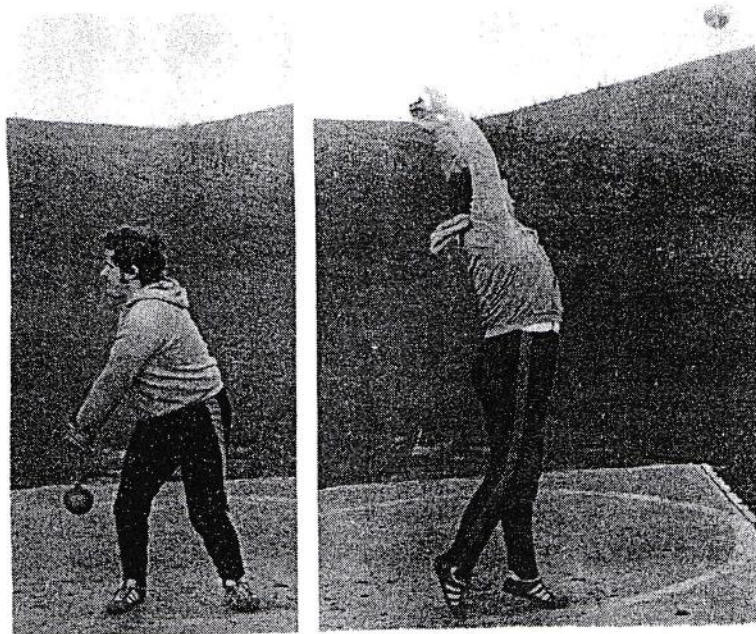


Fig 15

The next progression is to execute the throw starting with the hammer in the left hand only. Swing it in front of upper chest from a position outside the left knee. Place the right hand into the correct hold position dropping the hammer to a position outside the right knee. Now complete the swing and release as described and shown in Fig 15

### Step 3 - The Turns

In teaching the turns one should start with fairly simple drills and slowly progress to the more complex drills. A logical sequence would be the following

Attempt a single jump turn by starting with the back in the direction of the throw. Turn the left foot 90 degrees to the left with the heel off the ground. If necessary jump/turn around the left foot and execute the throw as described in Step 2. See Fig 16 for the movement of the feet

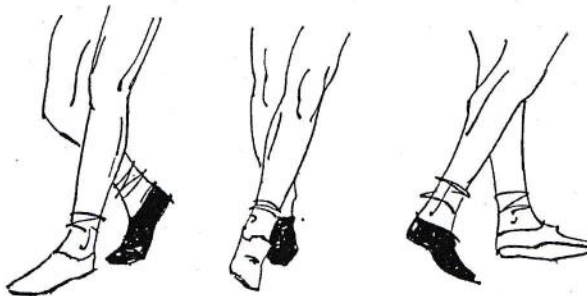


Fig 16

Progress now to a single jump turn, again with the back in the direction of the throw. This time balanced on the heel of the left foot, move through a turn to the left of 180 degrees. Then follow this by a further turn of 180 degrees on the toe of the left foot. In the second part of this movement ie the 180 degrees on the toe of the left foot the right foot is then brought and placed on the ground and the swing/release action executed. Figs 17, 18 and 15 are applicable

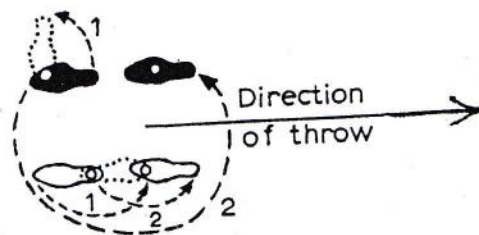


Fig 17

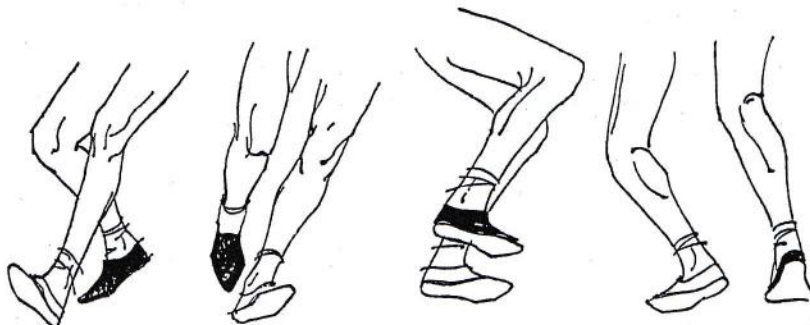


Fig 18

In the third and final section of teaching the single turn the object should be to eliminate the jump and work on the drill of 'turn-heel-toe-heel'. The skill is complex and requires much practice. Contact should be kept with the ground throughout with the left foot.

Progress should now be to the two turn throw. As the skill improves this can be improved until anything up to 6 turns can be completed. The footwork in a two turn throw is illustrated in Fig 19

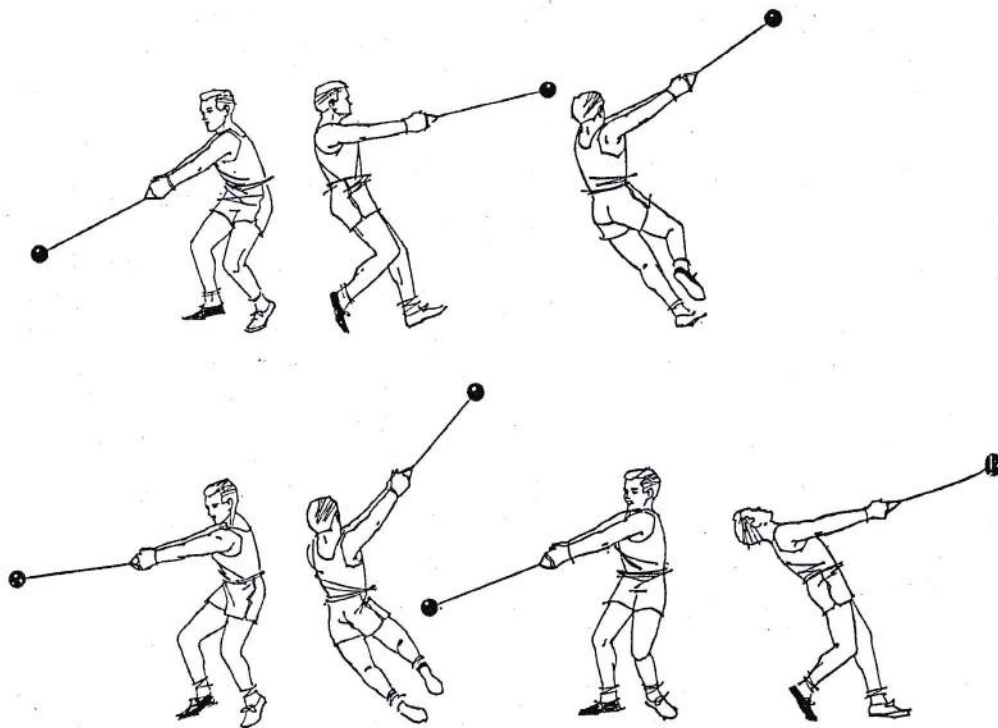


Fig 19

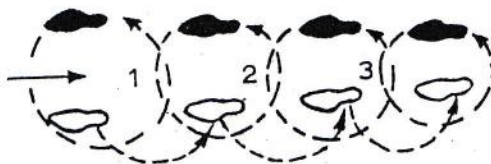
Progress can then be to lengthen the 'wire' of the hammer by attaching a nylon cord 4 feet in length forming a loop making the length from handle to hammer 2 feet/75cms in length

Teach and establish the low point of the hammer opposite the right toe and the high point, high left, at the point of release

Teach two swings, two turns and deliver starting the turns as the hammer passes the low point on the second swing keeping the hands low. Let the hammer find its own path to the high point as the pivot on the left heel begins

Gradually lengthen the hammer to 4 feet/1.22m

Progress to three turns



Step 4 - The Three Turn Throw

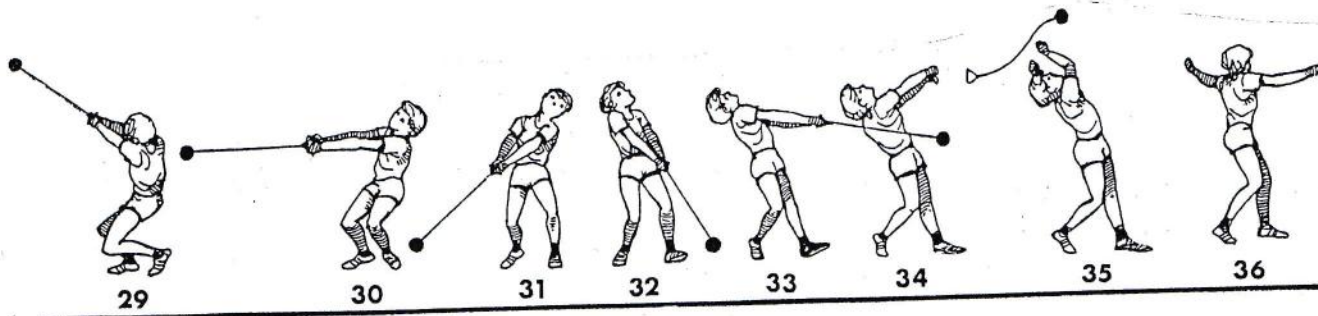
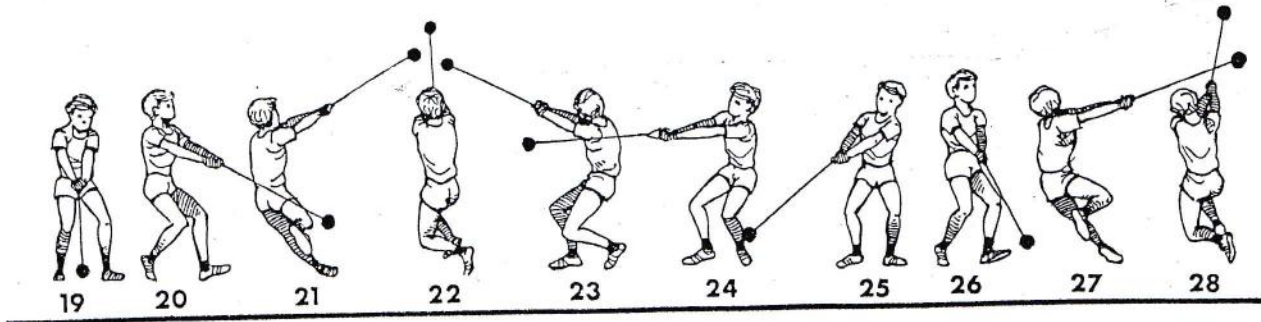
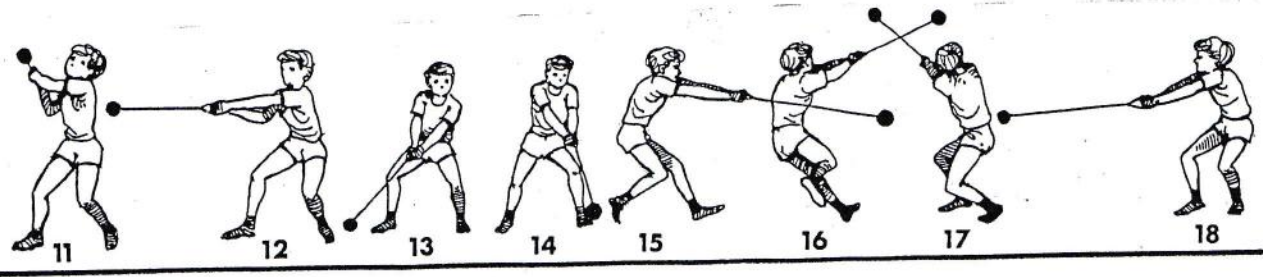
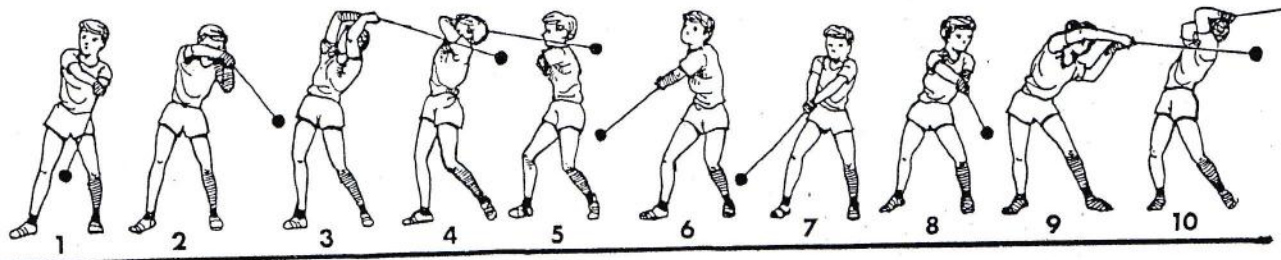


Fig 21

## SHOT PUT

Shot Put is a linear pushing event. Distance is achieved initially through speed of movement and the shot is released at an angle of about 40 degrees

The event should be taught in the following stages

1. The Grip and Positioning of the Shot in the Neck
2. Frontal Standing Puts
3. The Standing Put
4. The Movement across the Circle
5. The Shift

### Step 1 - The Grip and Positioning of the Shot in the Neck

Rest the shot on the base of the fingers ie the first, second and third fingers which are the main support. The thumb and little finger provide lateral support. The shot is tucked under the right side of the chin in the case of a right handed thrower. The athlete should think of a 'clean palm' and 'dirty neck'. See Figs 22 and 23

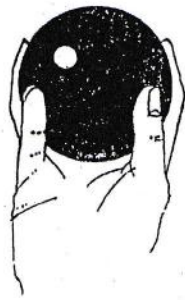


Fig 22

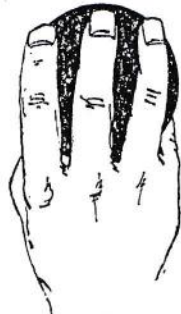


Fig 23

### Step 2 - Frontal Standing Puts

In order to teach and show the importance of (a) the pushing action (b) the use of the trunk and (c) legs and hips in the event the following drills should be taught and emphasised

Arm push only - See Fig 24

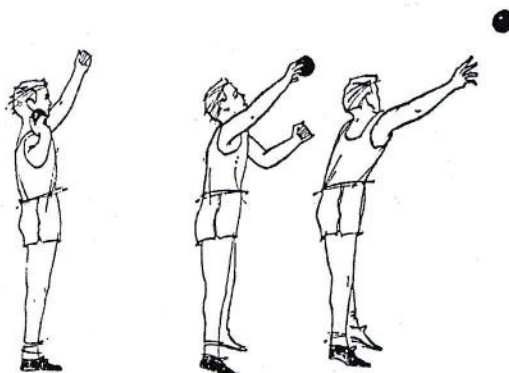


Fig 24

With the feet side by side and facing the direction of the put keep the legs braced throughout the movement. Place the shot into the neck and keep the putting elbow up. Bend the other elbow. Using the right arm only put as fast as possible

Shoulder/Arm Push - See Fig 25

Adopting the same stance as before repeat the movement but this time twist the waist, keeping the legs braced, and using the shoulders and arm put the shot

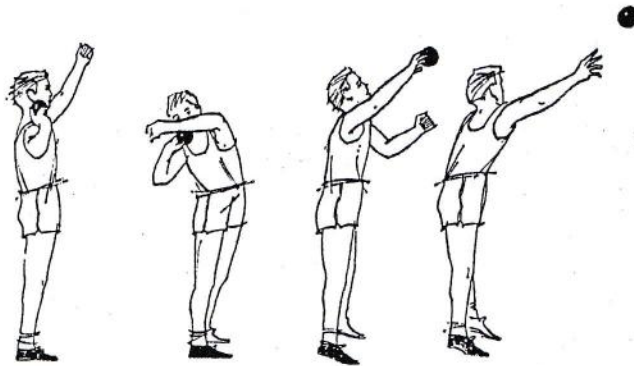


Fig 25

Legs/Hip Push - See Fig 26

In this final drill repeat the actions of the two previous movements but this time bend the legs and use them, together with the right hip, to vigorously initiate the action



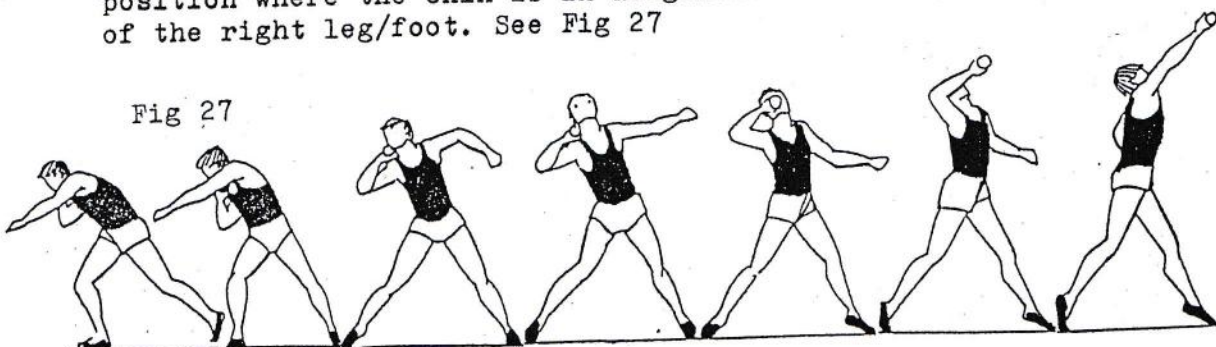
Fig 26

It should be clear from these three drills that with the each the athlete is able to put the shot further thus showing the importance of (a) the pushing action (b) the use of the trunk and (c) the use of the legs and hips

Step 3 - The Standing Put

To arrive in the correct throwing position the athlete should be taught to 'offset' the feet a little wider than shoulder width apart. The toe of the left foot should be in line with the heel of the right foot. The athlete should then rock back into a position where the chin is in alignment with the knee and toe of the right leg/foot. See Fig 27

Fig 27



Ensure that the elbow of the right arm is kept high and directly behind the shot. It must not be allowed to fall under the shot. The feet must be offset otherwise the action of the right hip is blocked. See Fig 28 for the position of the offset feet



Fig 28

To encourage the pushing movement of the right leg the athlete should be encouraged to rock back into this position. See Fig 29 and 30



Fig 29

With the feet side by side and the athlete facing the direction of the throw, rock back with the hips into a position of 'offset' feet and chin in line with the knee and toe of the right leg/foot. Immediately initiate the putting action as described earlier. Emphasise the fast right hip and fast arm action. Do not drop the left shoulder which would resemble a bowling action

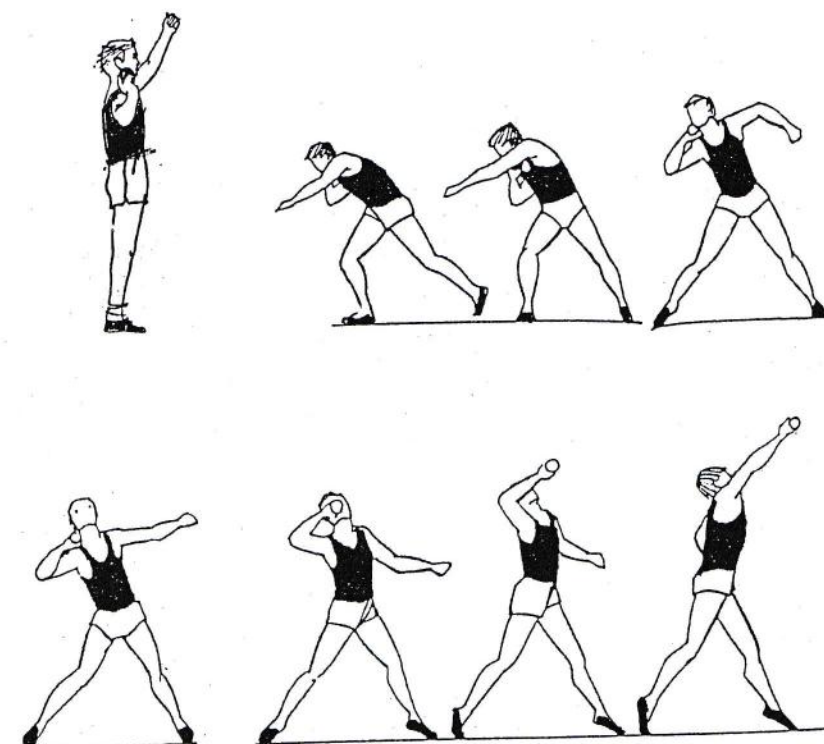


Fig 30

#### Step 4 - The Movement across the Circle

The shift is a difficult action requiring considerable leg strength. It is difficult for young athletes to learn. The following drills can be taught leading up to this complete movement

#### 'Side-on' Put or Sideways Shift - See Fig 31

The action is initiated by the left leg with a simultaneous hop off the right leg arriving in the correct 'offset' feet and 'chin-knee-toe' position to start the putting action

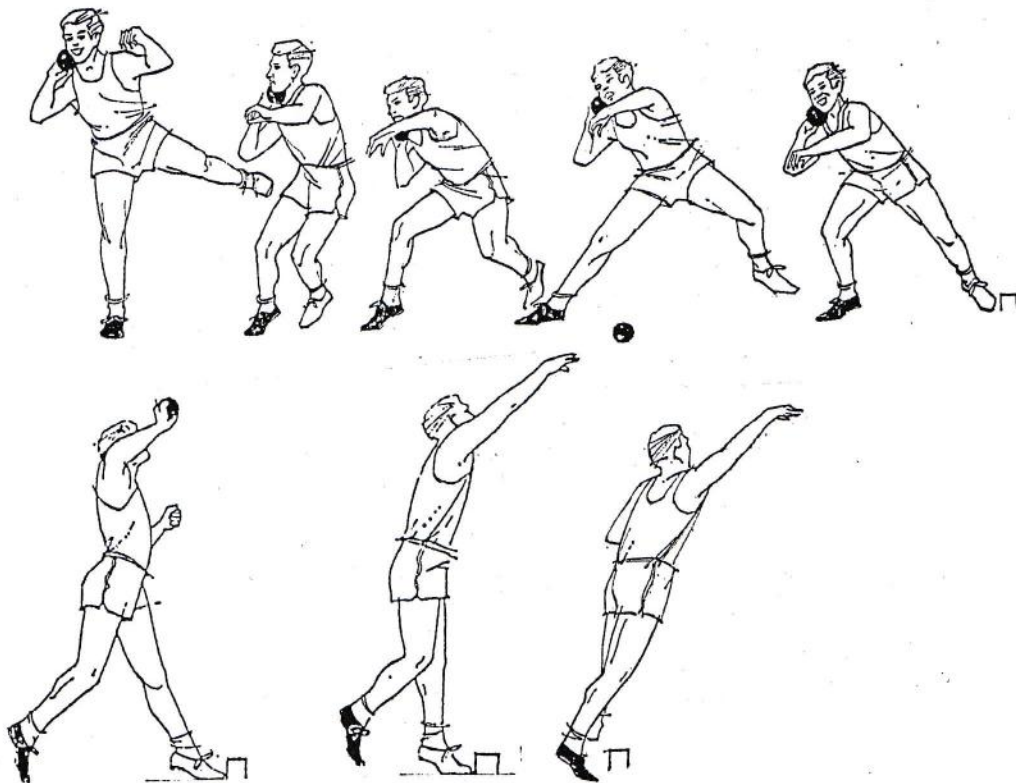


Fig 31

The athlete adopts the position as in the previous drill but turns a further 45 degrees away from the direction of the put and towards the rear of the circle ie 135 degrees from the front of the circle. The same 'side-on' or sideways shift is executed. Fig 32 shows the position of the feet at the start of the put

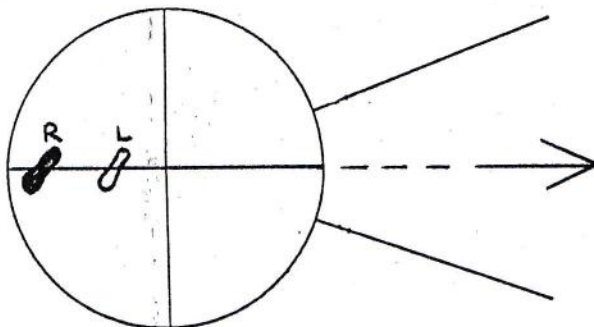


Fig 32

### The Step-Back Put

The athlete faces the rear of the circle and the opposite direction to which he intends putting. The weight is taken on the left foot and it is the right that initiates the action with it arriving first in the offset feet position. The full movement, as described previously, is completed. See Fig 33

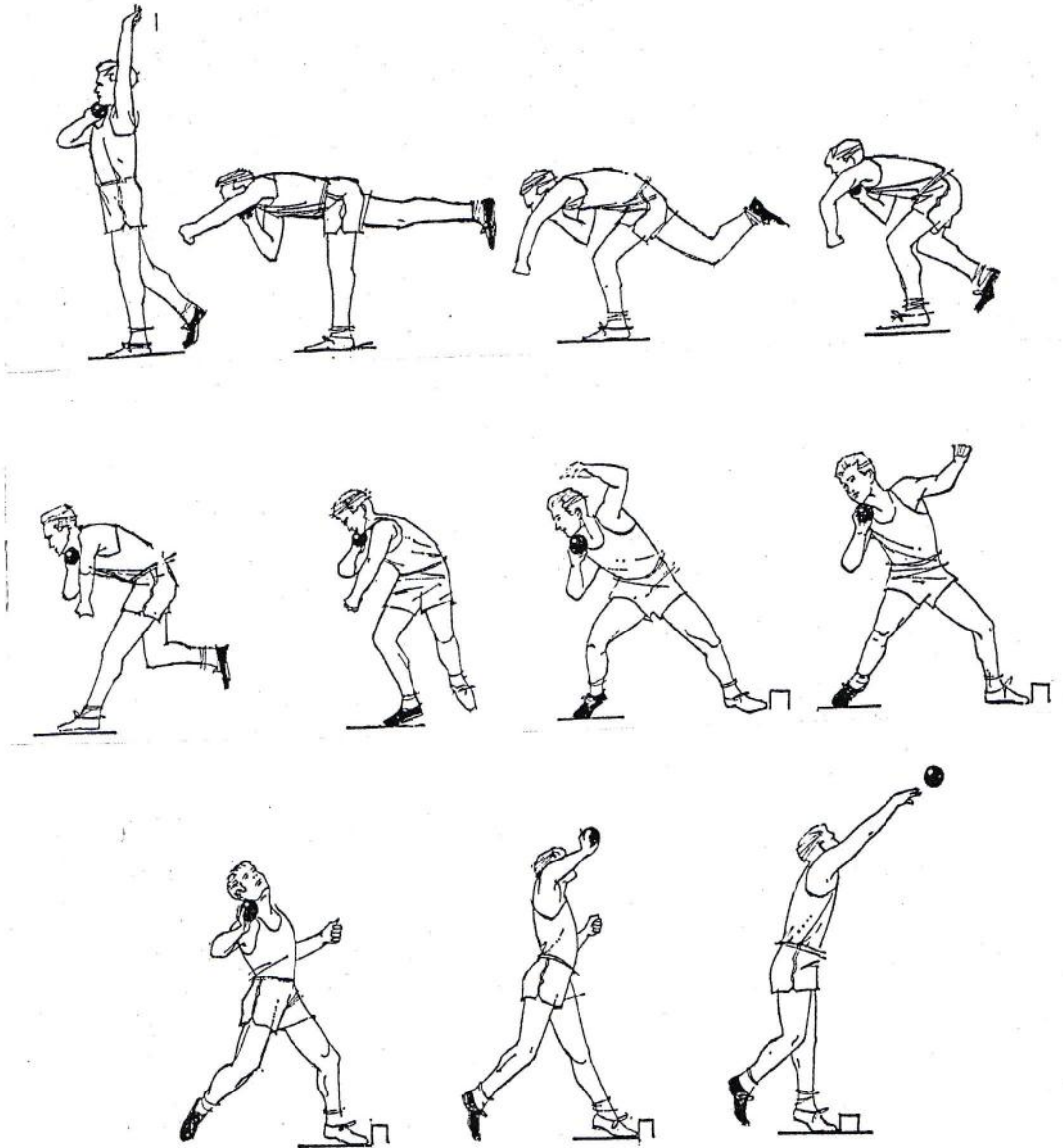


Fig 33

### Step 5 - The Shift

In contrast to the last drill the athlete, at the rear of the circle, and facing the opposite direction to the put initiates the movement with his left leg whilst his weight is on his right. The full movement can be seen in Fig 34

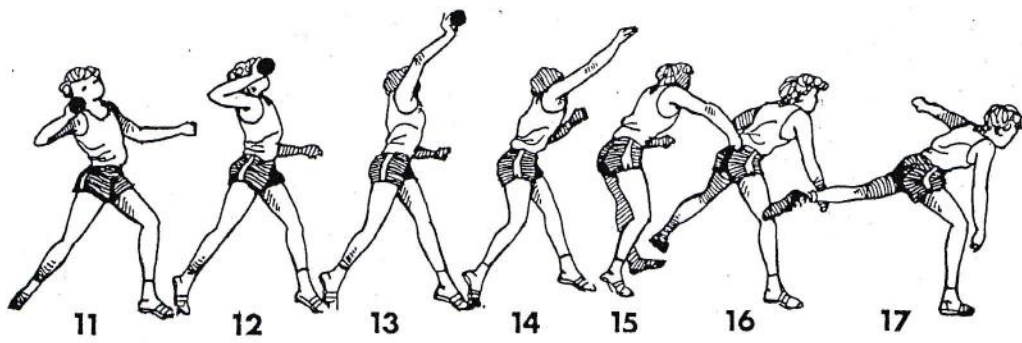
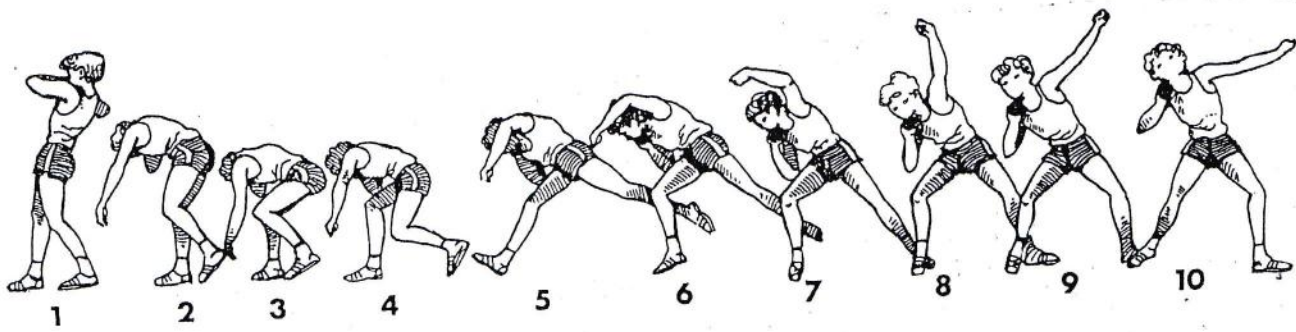


Fig 34

## JAVELIN

Javelin is a linear pulling event. Distance is reliant upon speed of movement particularly in the throwing arm and the implement is released at an angle of about 40 degrees

The event should be taught in the following stages

1. The Grip
2. The Carry Position
3. The Standing Throw
4. The 3-Stride Run-up
5. The 5-Stride Run-up
6. The Full-Throw

### Step 1 - The Grip

The javelin should be gripped down the centre of the palm. The palm of the hand should always be facing upwards. The little finger is always closest to the point of the implement with the binding on the shaft gripped at rear in either of the three following positions

- (a) with the thumb and first finger - See Fig 35
- (b) with the thumb and second finger - See Fig 36
- (c) in a V grip with the first and second finger - See Fig 37



Fig 35

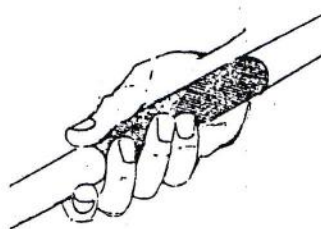


Fig 36



Fig 37

### Step 2 - The Carry

The exact position of the javelin is unimportant provided it is comfortable and allows for freedom of movement both in the running and throwing action. It is recommended that the javelin be carried overhead with the elbow pointing to the front, the palm facing skywards and the javelin pointing straight forward. A 90 degree angle between the lower and upper arm is preferable. See Fig 38

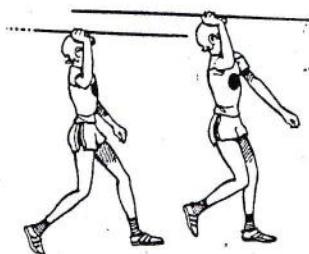


Fig 38

### Step 3 - The Standing Throw

In the case of a right hand thrower withdraw the right arm until it is fully extended to the rear. The palm is still skywards, the throwing hand level with the shoulder and the tip of the javelin roughly level with the eye

Simultaneously place the left foot in the front of the right comfortably apart and a little more than shoulder width. The feet should face in the general direction of the throw. Hollow the back by leaning backwards making a bow between the right arm/right side of the trunk/right leg

Initiate the throwing movement with the right hip driving forward following quickly by the shoulder and the fast arm strike. The elbow is kept high and comes through first. See Fig 39

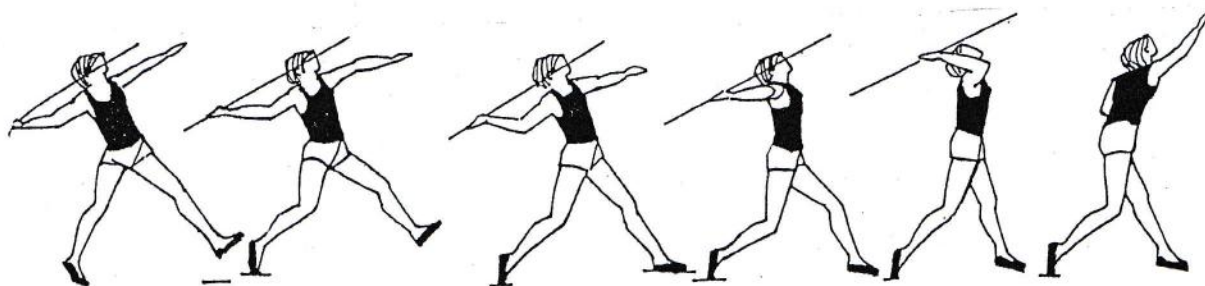


Fig 39

### Step 4 - The 3-Stride Run-up

Start the run-up from a feet together position facing the direction of the throw and with the javelin fully withdrawn as described earlier. Start with the left, lift the right knee up and lean slightly backwards on landing, placing the left foot down as quickly as possible. All three strides are flat-footed and should follow the rhythm 'left foot - quick/quick'. The landings must be on the heels and not on the toes. See Figs 40 and 41

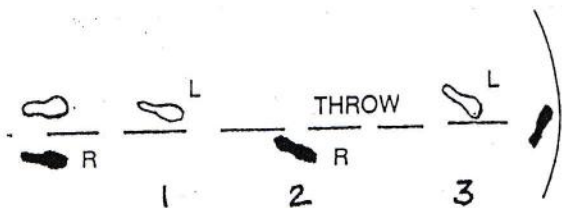


Fig 40

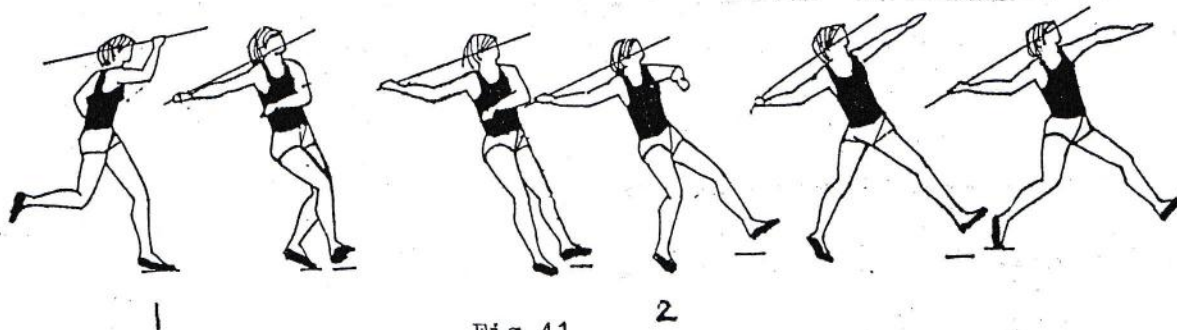


Fig 41

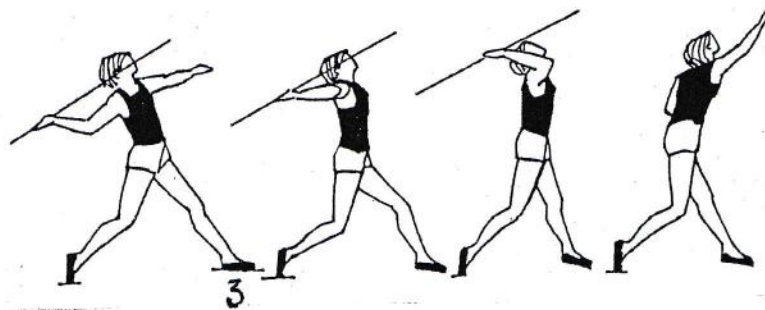


Fig 41 (contd)

Step 5 - The 5-Stride Run-up

Again the athlete should start the run-up from the feet together position with the javelin withdrawn. The two extra strides in this drill are to withdraw the javelin and then the athlete executes the 3-stride action. The whole movement should follow the rhythm

Withdraw (L foot)	Withdraw (R foot)	Left foot (L foot)	Quick/Quick (R - L foot)
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With the speed element being introduced and depending on the speed of movement/release some athlete may introduce an additional recovery stride at the end of the 3 and 5-Stride Run-up

See Fig 42 for the stride pattern and Fig 43 for the whole movement

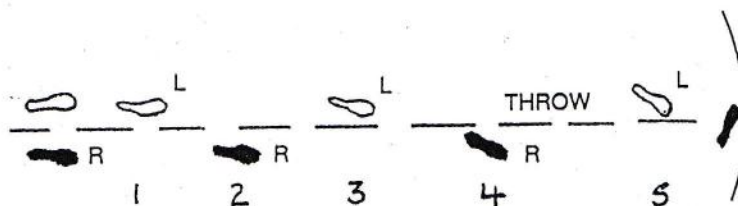


Fig 42

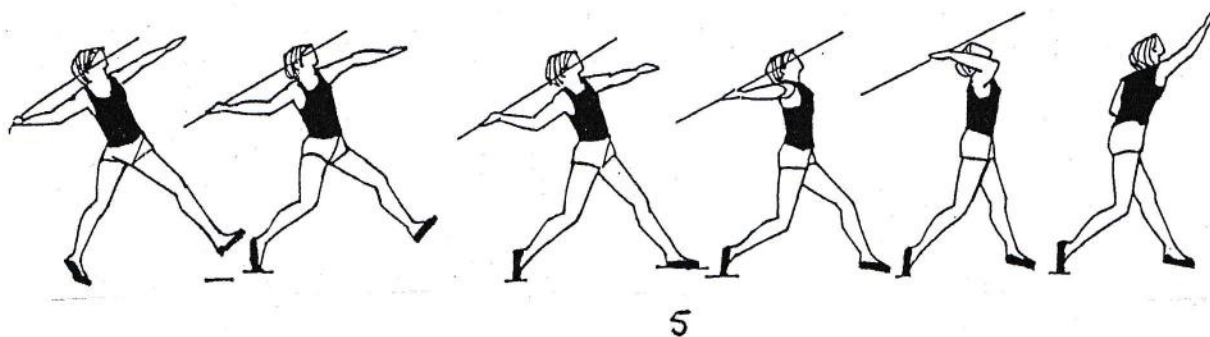
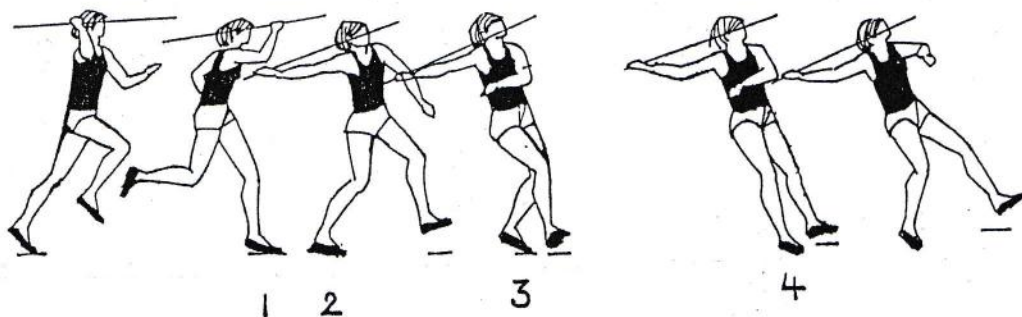


Fig 43

## Step 6 - The Full Throw

To progress further from the 5-Stride approach units of 4 strides should be added. Care should be observed that this speed is controlled. A 9-stride approach should be sufficient in young athletes. The start of the run-up for the full movement should be commenced from a feet together position. Care should be taken throughout this and other drills that the movement starts slow and finishes fast and up on the toes. Fig 44 shows the run-up and feet placement whilst Fig 45 is a further illustration of the last few strides of the throw

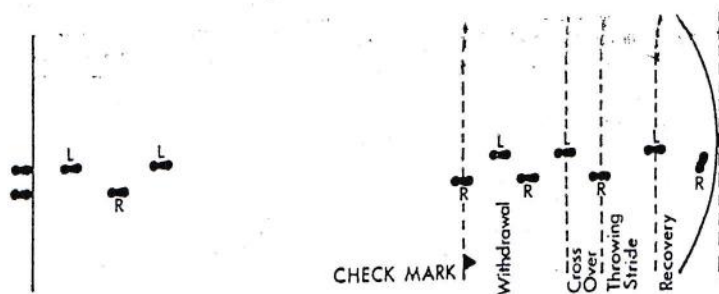


Fig 44

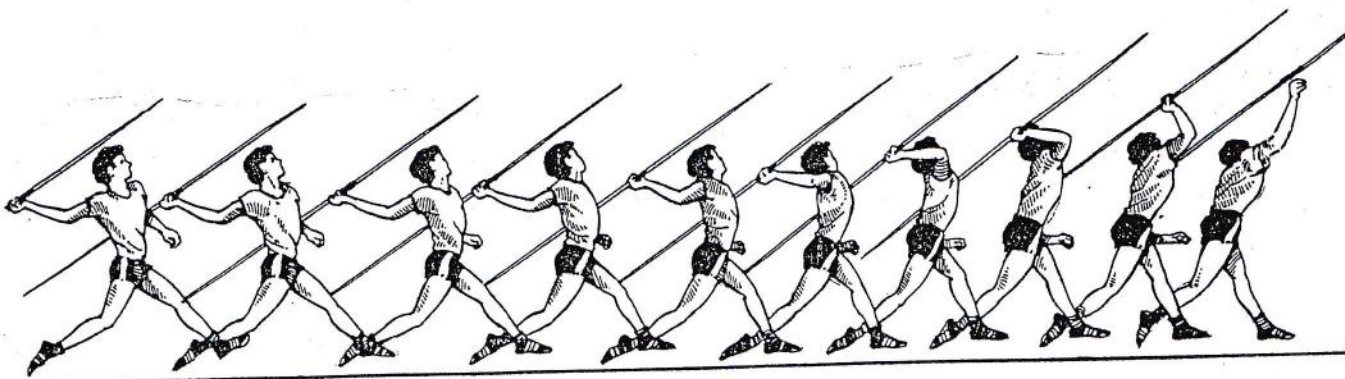
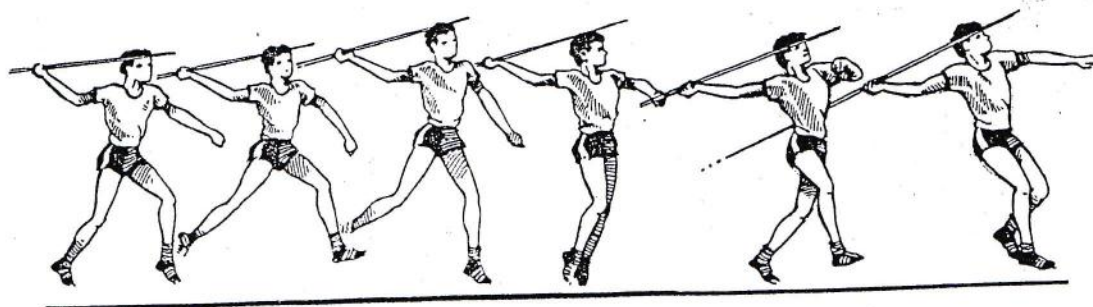


Fig 45

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- Personal Communication with Mr C J Johnson B A A B National Coach



“And hopefully you will be able to develop into this.”