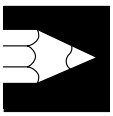
ROYAL NAVY

THE ROYAL MARINES

Athletics


Student Notes


Teacher Notes

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If there is any support you feel the Royal Navy can give regarding this project please contact 0870 333 0423.

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Technical Editor: **Phyl Edwards M.A.**

CONTENTS

Introduction to the Track and Field Athletics Module

Track and Field Athletics is a sport which has something to offer everyone. The range and variety of the individual events offers scope to students of different body types and different levels of physical and mental ability.

At the highest level of performance individuals tend to specialise in the specific event(s) for which they are best suited. They undertake long and arduous training in order to be able to compete, often throughout the whole year.

At school level this is generally not the case, and for the most part athletics will take place in a unit of time, usually during the summer term, a term which in itself is often cut short by public examinations and holidays. Given the short time, and the fact that within the curriculum athletics is being used as a means of educating students, and not as a vehicle for competition, it is important that students should be provided with a range of experiences covering the full diet of athletic events. Students' enjoyment of the sport should be encouraged by placing the emphasis on activity, variety and enjoyment rather than on competition *per se.* This is not to deny the place and importance of competition, but to ensure that it is kept in perspective. Competition in athletics is not only against others, but against self. The concept of the "personal best" can be used to measure self against self across a period of time. This idea of recording performance gives athletics another advantage within the curriculum, in that data collected on the athletics field can be used to inform and support other areas of the curriculum, and can also be used as a part of project work for the GCSE examination.

Most athletics covered by the media relates to able-bodied sport, but athletics as a sport lends itself very well to participation by disabled students. The rise of events such as the Paralympics and Special Olympics shows the levels of excellence which can be achieved by disabled athletes. While it is acknowledged that incorporating disabled students into mainstream class teaching is not easy, the benefits which can be gained by all students is well worth the additional effort.

Module Aim:

To provide a framework in which the sport of athletics may be taught safely, and to a level required for the GCSE examination.

Module Objectives:

Students will:

- be able to perform the skills and techniques of the different events safely.
- understand the rules which govern these events.
- understand and appreciate the competitive nature of the sport, and to apply this at their own level of performance.
- be able to carry out simple officiating duties.
- be aware of the structure and function of the sport's governing bodies nationally and internationally.
- understand the theoretical concepts related to the sport.

Safety and Injury Prevention

Before staff commence use of this resource pack the authors wish to remind them of the importance of health and safety in the teaching of athletics. All sport can be intrinsically dangerous, and therefore it is important to ensure that all necessary precautions are taken to prevent accidents and injury. This text does not deal specifically with the treatment of injuries, and staff are advised to make reference to their own school and local authority regulations regarding this matter.

Injuries

There are 2 main types:

- self inflicted
- external.

Self inflicted:

(1) damage to soft tissues which include:

- muscle and tendon tears
- sprains and strains
- deep bruising.

These result from:

- overuse
- stress for which the body was not prepared.

Treatment: Such injuries readily respond to physiotherapy treatment.

(2) injury to the bone structure, particularly joints; for example, stress fractures (hairline splits running the length of the bone).

These result from:

- too much training on hard surfaces
- poorly designed training shoes with a poor cushioning effect
- moving too quickly into speed work.

Training too much at a young age can cause injury which, at worst, can result in serious long term injury and arthritic conditions in middle age.

Treatment: Prompt reduction in training.

External Injuries result from accidents involving:

- equipment (hurdles, throwing implements)
- collisions with other athletes
- spiking by other runners.

Safety must never be neglected

Full details on safety are to be found in the AA of E pamphlet "Athletics – Keep it Safe" and the BAALPE Safety booklet (see end of the module).

Message From UK Athletics

Athletics has a most unique position in sport, because it is several sports. The Olympic programme has 24 mens events, and women will have the same when pole vault, hammer throw and steeplechase are added to the existing 21. It has single events such as 100m, and combined events such as decathlon. It has individual events such as high jump, and team events such as relays and the European Cup competition. It is for all ages, and there are competitions both for able-bodied and disabled athletes. In addition to the events of the Olympic programme, athletics also includes tug of war, cross country, road running and fell running.

Through its collection of sports, athletics gives people an opportunity to achieve success. Because performance can be measured by a stopwatch or measuring tape, athletes have personal or team challenges to beat their own best time, distance or height. Each improvement is achievement. Then again, athletes have personal or team challenges to better other athletes or teams. In short - you don't have to win a gold medal to be an achiever in athletics. You can decide your goal, then go for it. One day that goal may well be a gold medal!

Through the discipline of practice and training for athletics events, the sport also provides a great opportunity for development of personal conditioning in terms of strength, stamina, suppleness and speed - qualities valuable not only for athletics, but for all sports.

The fact is, then, that athletics has something for everyone.

UK Athletics is justifiably proud of an education programme designed to meet the needs of all levels of athlete and of those responsible for their development. In particular, your attention is drawn to the following:

UK Athletics Teaching Certificate (Secondary)

UK Athletics Teaching Certificate (Primary)

This module is intended to be a guide to students in secondary schools who wish to follow a detailed study of athletics. Any reader wishing to follow up with an in-depth study of any aspect is advised to consult the list of publications at the end of the module.

Finally, we wish you every success in your work of leading young people into understanding the world of athletics.

Skills Development Sheet

Athletics offers something for everyone. The range and variety of the individual events means that individuals with different physiques and mental ability can take part.

The beginning stage of learning athletics is the exploratory phase where the athlete is attempting to learn the correct sequence of movements of all the basic skills e.g. running, throwing, jumping. A number of errors may be made and athletes will need feedback to recognise and correct these errors.

During the intermediate stage the basic skills will be performed more consistently and fluently and an athlete may now begin to specialise in certain areas.

At the advanced stage all the basic skills are automatic and an athlete may tend to specialise in a specific event for which he or she is best suited. Competition will be a key element, whether this be competing against self or others.

Name of Module	Athletics: Field Events – Jumps
Basic Skills	Long jump, triple jump, high jump, the pole vault (pages 21-34)
Basic Techniques	Approach run, take off, flight, landing. (N.B Triple jump approach run will also include the hop, the step, the jump.) (pages 22-34)
Training Principles	Skill, speed, stamina, strength, suppleness (page 51)
Safety	Keep pit well dug and free of foreign objects Board (if used) should be checked Run way should be level and firm Ensure that landing areas comply with guidelines laid down by Amateur Athletics Association (A.A.A.) for Fosbury flop and pole vault Standard pole used (pole vault)(pages 22, 26, 31, 32)
Rules and Regulations	Take off must be behind scratch line (long jump and triple jump) Measurement is made from nearest break in sand (long jump/triple jump) Read from the tape zero in the sand to where it crosses the scratch line (long jump and triple jump) Best of 3/6 jumps count A tie is settled by taking the second best attempt A failure is recorded when athlete either fouls the jump line (long jump/triple jump) or dislodges the bar (high jump/pole vault).

Name of Module	Athletics: Track Athletics
Basic Skills	Sprinting, relays, middle distance running, walking, hurdles, steeplechase (pages 6-20)
Basic Techniques	Leg action, arm action, positive, economy of effort (page 6)
Training Principles	Skill, speed, stamina, strength, suppleness (page 51)
Rules and Regulations	Contact: U.K. Athletics (page 65) (governing body – Amateur Athletics Association)
Safety	Hurdles – may be dangerous on wet grass or uneven surfaces Never let athletes run over hurdles from opposite direction (page 8) Always check track is even, firm and free of foreign objects

Name of Module	Field Events – Throws
Basic Skills	Discus, javelin, hammer (pages 35-50)
Basic Principles	Transfer of weight, build up of speed (slow to fast/low to high), extension of body from ankle – legs – hips – back – chest – arms, rotation of knee/hip towards direction of throw (page 35)
Safety	Create a safe environment Check equipment Look before you throw "All throw – all retrieve" (page 36)
Rules	Shot: put is made from a 17.78cm circle putter must begin throw from stationary position shot must be put with the hand shot must be put within a 40° sector Discus: identical to shot, but no stop board and diameter of the circle is 2.5 metres Hammer: made from a circle 2.135 metres in diameter throw must exit the circle after hammer landed Javelin: throw made between two parallel lines 4 metres apart. Javelin must land point first (pages 36, 43, 47, 50)

UNIT 1
Introduction to Track Athletics

RUNNING

Running is a "natural" event in which everyone who is ambulant can participate to some level. Running is based on the following elements:

- economy of effort
- leg action — support phase; push off phase; non-supporting phase
- arm action
- posture

Economy of Action

When an athlete starts and continues to run, energy is expended as the muscles contract and relax. It is important for the athlete to relax the muscular tension and to apply the energy effectively.

Leg Action

- The push off phase creates forward movement.
- The supporting phase is when the foot makes contact with the ground and absorbs the impact of the body.
- The non-supporting phase is when the runner has no contact with the ground.

Arm Action

- The swinging action of the arms assists by balancing and coordinating with the legs.

Posture

- The upper body is erect with the head in a relaxed position.

RUNNING EVENTS

Running is divided into two broad categories:

- Sprinting
- Endurance

Running events do require skill and show greatest improvement through training and competition.

N.B. Competition need not always be against others, but may be against self.

Sprinting

Technique: See Table 1.1

Activities:

1. Timed runs over a set distance, for example 30 – 60 metres.
2. Set time runs; how far can you run in 3 or 5 seconds?

Example:
Work in 2s, No. 1 the runner No.2 the official.

No. 2 stands at a distance which it is estimated can be covered in 3 seconds.

Teacher gives commands "Ready, Go" and starts the clock.

After 3 seconds a whistle is the signal to stop.

Runner slows down gradually. No. 2 moves to mark the 3-second distance.

Repeat 2-3 times and try to improve distance covered.

Repeat using 5 seconds.

N.B. The top sprinter can cover 100m in under 10 seconds, in 5 seconds he would run approximately 50m.

Guided Discussion:

Compare your 5-second time with the men's and women's 100m best times (men 9.79 and women 10.49). How far would they have gone in 5 seconds?

To improve sprinting speed students should work on:

1. Reaction time
2. Leg power
3. Starting techniques
4. Running techniques
5. Speed of movement
6. Speed/endurance capacity

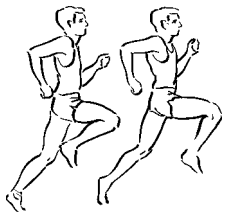
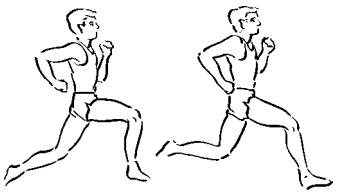
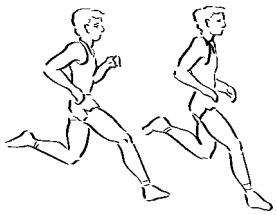
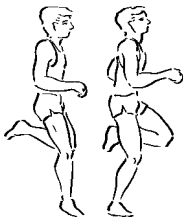
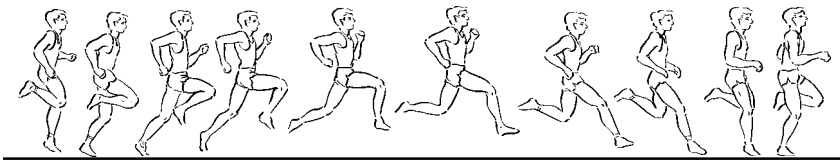
RUNNING	PHASE	OBSERVATION POINTS
	SUPPORTING	Run tall – run on toes. Shoulders always relaxed.
	PUSH OFF	Run tall. Good extension/push off rear leg. Good 90° angles at elbow and knee.
	NON-SUPPORTING	Run tall. Knee high in front to hip height. High elbow at back to shoulder height.
	NON-SUPPORTING	Run tall. Claw lead leg back to run away off it. Look straight ahead "Focus on something throughout".
	SUPPORTING	Run tall. Same rules as for picture 1 but on opposite leg. It is important always to try to run relaxed in the top half of the body (head, neck, arms); straining uses up energy.
Side view 		

Table 1.1

STARTING

The most efficient way to start a sprint race is the crouch start. However, with a novice a standing start is recommended.

THE STANDING START

The standing start is far more efficient for novices than a crouch start. The reasons for this are that it is a simple skill to teach, and that it can be developed using tag games etc.

Description:

- stronger leg forward, toe to the line, and the other leg to the rear
- both legs bent with feet pointing towards the direction of running
- arms synchronised with legs
- weight on forward leg, hips low, back straight.

Activity:

Put the start into a competitive situation by racing over 10-15 metres.

Observation:

Does the student:

- drive away vigorously?
- keep low?
- push the ground back behind?
- use the arms vigorously?

THE CROUCH START

This is a more efficient way to start sprinting.

Aim:

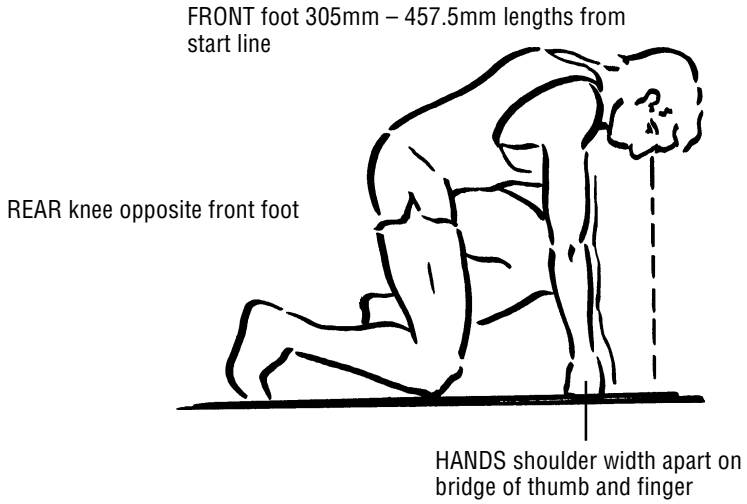
To leave the blocks as fast and efficiently as possible, and to get into the full running stride as quickly as possible.

Technique:

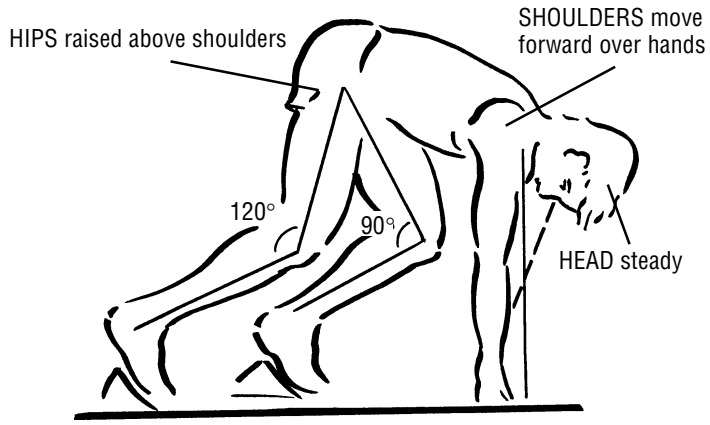
See Figure 1.1 right and Table 1.2.

Figure 1.1 shows the different phases of the start relative to the commands of the starter.

"ON YOUR MARKS"



"SET"



"GO"

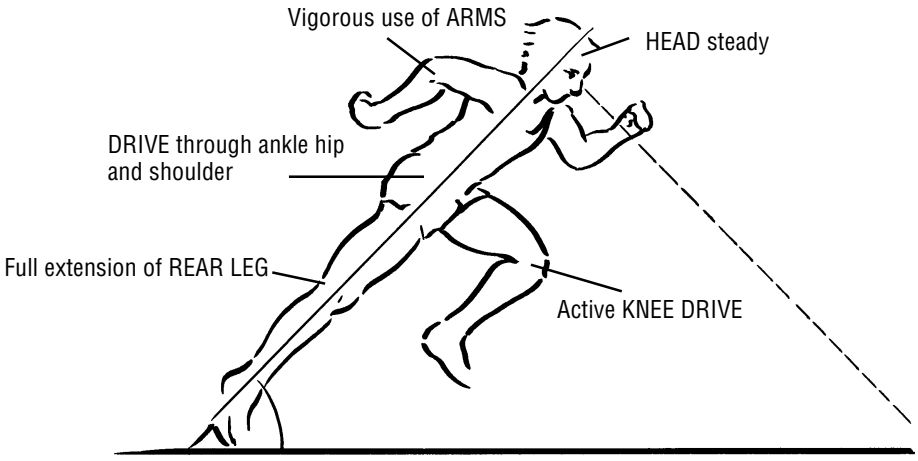
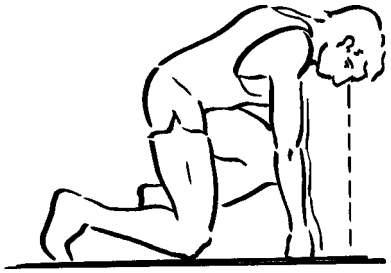
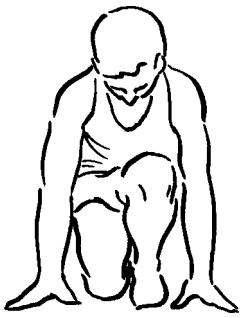
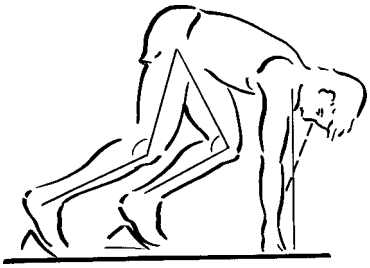
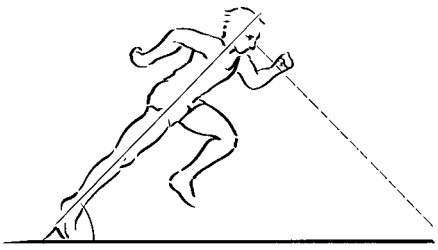
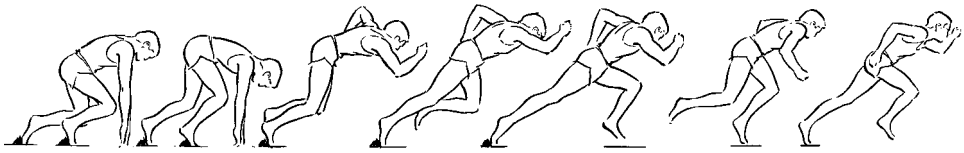


Figure 1.1

Table 1.2

CROUCH START	PHASE	OBSERVATION POINTS
	"ON YOUR MARKS" (side view)	Focus eyes on where first stride will land. Shoulders directly over hands. This is a medium start. Place the rear leg knee in line with front foot.
	"ON YOUR MARKS" (front view)	Hands make bridge between thumb and forefinger. Hands are placed shoulder width apart.
	"SET POSITION"	Shoulders move forward and up (needs strength!). Hips move up higher than shoulders so making correct angles at knee joints (90° front knee, 120° rear knee). Keep head in line with spine.
	"GUN"	Vigorous arm action (fast elbows) to get legs moving. Drive and extend – good line from toe to head. Drive hard off blocks and drive head and shoulders out.
Side view 		

Activities:

1. Starts from different positions, e.g. cross legged, lying on back feet to the start line, head to the start line, lying on front, etc. "Ready"; "Go" get up and sprint to the finish.
2. Indian File: athletes run one behind the other at a steady running pace. On whistle, try to overtake as many people as possible before reaching the finish line. Overtake **only** on the outside.
3. 10 seconds run: Markers are placed at 50 metres, 55 metres, 60 metres, 65 metres, 75 metres, or 80 metres.

- These distances represent one point, two points, three points, four points and five points respectively.
- The students sprint towards the markers until the whistle is blown.
- They get points according to the markers they have passed.
- The students should be encouraged to make three runs with suitably spaced recovery, and challenged to score as many points as possible.
- The basic idea is that all should score one point, while a few should score five points.

4. Relays such as shuttle type, out and back relays or circular relays promote fast running with an element of luck associated with the results which means it is not always the physically gifted who are successful. This is an enjoyable way to encourage students to run fast.

UNIT 2
The Relays

Introduction
Relay running is a most enjoyable form of training and competition for athletes of any age. It can range from relay type games involving teams of 3 – 6, to the formally known 4 x 100 metres relay.

Shuttle Relay
Each runner in turn starts off the next runner by the touch of a hand. (See Figure 2.1)

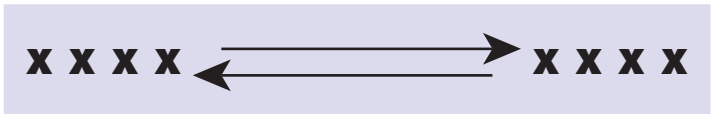


Figure 2.1

Out and Back Relay
Here objects such as bean bags, footballs or cones are set out at points equidistant from the start line. The first runner brings back all the objects individually; the next runner sets them out again in their original position, and so on until the relay is complete. (See Figure 2.2)

Figure 2.2

Circular Relays
These involve passing a baton; the distances run and the number of runners can be varied to suit the ability of the students. How can a team improve its speed?

The key factors to bring about improvement are either faster runners, or better change-overs. As baton passing involves skill, it will require much work in order to achieve consistent, smooth and efficient change-overs.

The Relay Race

Aim: To move the baton from start to finish as quickly as possible.

Technique: To maintain the speed of the baton, it is necessary to match the speeds of the incoming and outgoing runners. The baton must be exchanged when both runners are at maximum speed.

Activity:

- Work in 2s, both about the same speed.
- 4 cones are placed as below.

- No. 1 starts at cone A; No. 2 starts at cone C.
- When No. 1 reaches cone B; No. 2 sprints off and attempts to reach cone D before being tagged by No. 1.
- Increase distance between B and C so that both athletes reach D at the same time.

Development: Introduce the baton, change-over zones and different methods of baton passing.

Baton Passing
There are 2 methods of passing:

- upsweep – which is recommended at school level
- downsweep – the preferred method at international level

The baton is passed from right hand to left hand to right hand etc.

The zone is described in Figure 2.3 below.

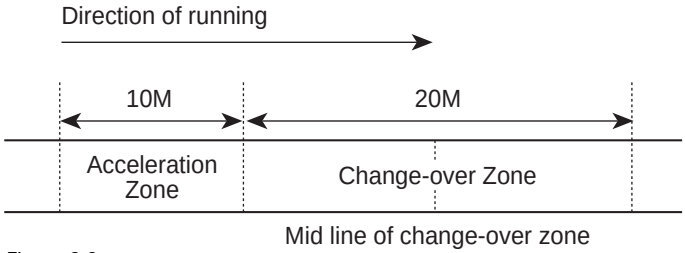
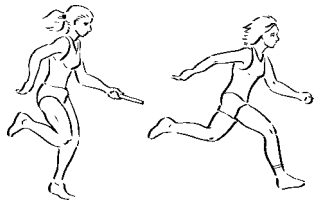
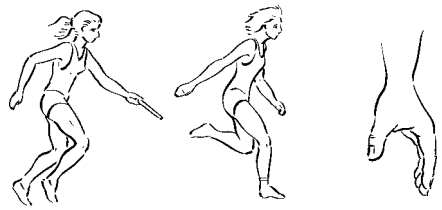
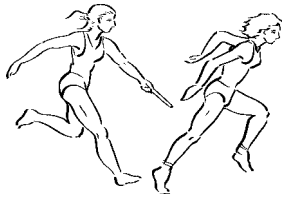
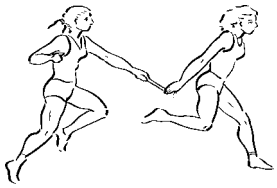
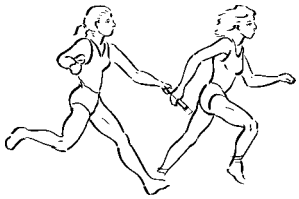
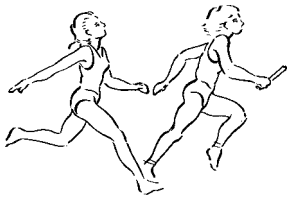
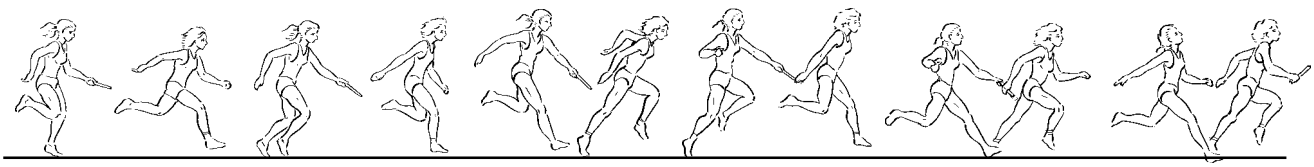


Figure 2.3

Table 2.1

RELAYS UPSWEEP METHOD	OBSERVATION POINTS
	Incoming runner shouts “hand” or outgoing runner has run correct number of strides and so puts hand back to receive baton. **General rules:** It is the incoming runner’s responsibility to make sure that change-over takes place, i.e. he/she must observe what is happening.
	Outgoing runner holds receiving hand with palm down in wide “V” shape formed between thumb and fingers. Exchange takes place by passing from right hand to left or vice versa. **Never** left to left or right to right as collisions can occur.
	Incoming runner **watches** baton right into the exchange to be sure of success. Outgoing runner must hold receiving arm steady; otherwise difficulties can occur.
	Incoming runner presents as much of baton as possible to give outgoing runner something to grab hold of. Baton is swept firmly upward into “V” shaped receiving hand.
	If change-over has been successful, then both runners should be travelling at speed. There should be “free space” between the exchange to prevent collision.
	Outgoing runner keeps baton in receiving hand; exchanging hands wastes time. Free space to side should allow incoming runner to run through if necessary.
Side view 	

RELAY – DOWNSWEEP METHOD

The technique is as for the upsweep but, the outgoing runner holds the hand high and flat to receive the baton. The incoming runner uses a downward sweeping movement to place the baton in the receiver's hand. The incoming runner should place only the end 7.6cm to 10cm of the baton into the hand; the baton is swept firmly downwards into the receiving hand. (See Figs. 2.4 and 2.5)

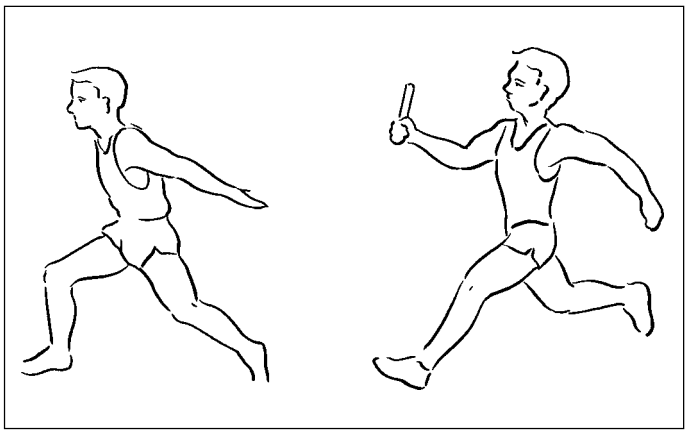


Figure 2.4

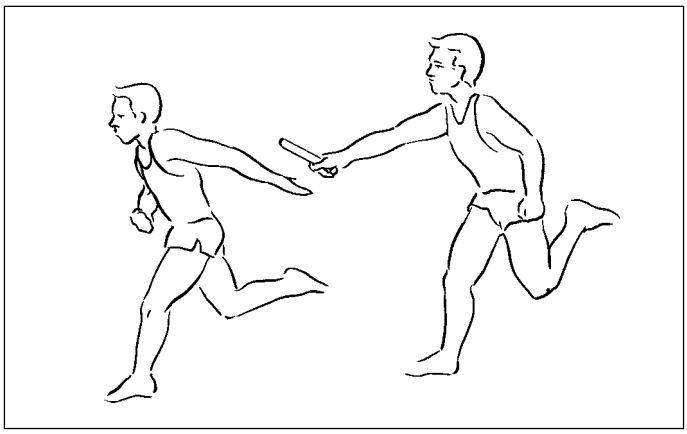


Figure 2.5

Development: Having established the mechanics and rules of baton exchange, put into a competitive situation such as a 4 x 25 metres or 4 x 50 metres relay race where changeovers are more important than running speed.

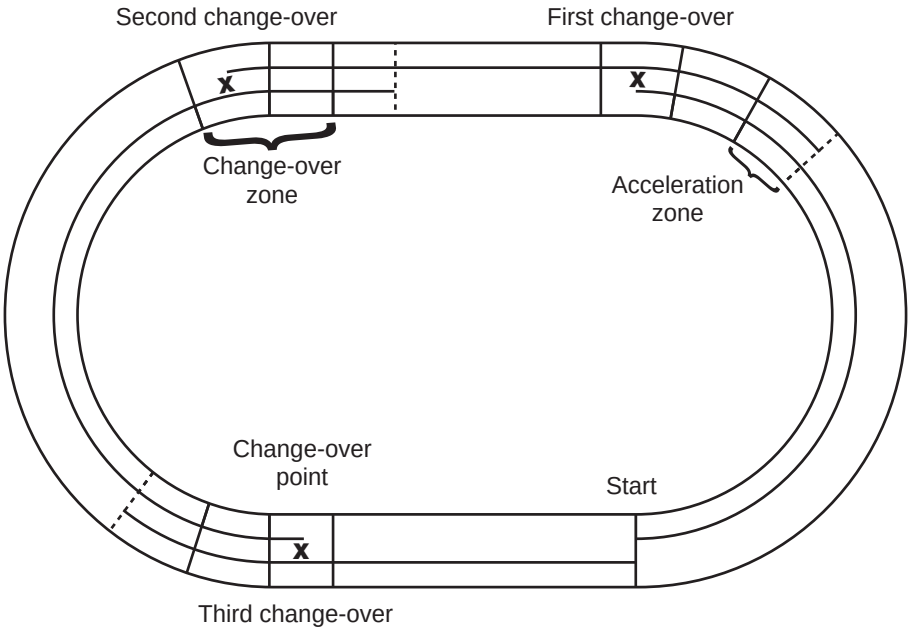


Figure 2.6 The take-over zones for a 4 x 100m relay

UNIT 3
Middle Distance Running

In the athletics calendar of events this is generally taken to mean the 800 and 1500 metre races. In the U.K. most middle distance running is based around a cross-country tradition at the local athletic club or school. One of the advantages of these events is that they do not require any sophisticated equipment, or elaborate track markings.

The technique is very simple, and individual runners will have their own styles of running.

Activities:	Competitive type work is the best way to inspire the novice runner. Examples of good activities are:
1. Devil Take the Hindmost	The runners run in a group and the athlete who is last as the group passes certain given points on the track must drop out or miss a round.
2. Flag Runs	Flags are set out at certain intervals (e.g. 120m, 125m, 130m, 135m 140m) from the start line. A standard of 20 seconds is set (varying according to the age and standard of the athlete). If the athlete reaches the farthest flag, he/she is awarded 5 points, and so on, down to 1 point. A walk back recovery is given. The athlete accumulating the most points over a set number of runs is the winner.
3. Continuous Relays	These are a good way of disguising interval work. For example, this can be run around a field or a track or any course that is safe to do so. N.B. Remember that however many relay legs there are, there is a need for one more runner than there are relay legs to make the relay continuous.
4. World Record Runs	Try to beat the world record for 800 metres, 1500 metres etc. with any number of youngsters, e.g. 10 runners x 150 metres or 8 runners x 100 metres around a track. It is particularly useful if lap times are worked out in advance and times are called at regular intervals.

TRAINING IDEAS

The following are training ideas to motivate those who are not committed.Those who are willing to train at more conventional middle distance schedules should be recommended to join their local athletics club.

1. Continuous Relays	Divide the numbers in the group into equal teams and spread them around the track circuit. Run until each runner is back in original place.
2. Line Runs	Last person in a line of joggers sprints to the front and starts jogging again; person now last sprints to the front and continues jogging, and so on.
3. Whistle Runs	On a whistle blast the group stride out until the next blast.
4. Whistle Pace	Athlete is asked to run a certain distance in a given time, e.g. 300m in 60 secs. Each 100 m to be run in 20 secs. To develop pace judgement, whistle is blown at 20 sec. intervals. Variation – same time and distance with 100m run in 21 secs, 18 secs, 21 secs, – gets athlete used to change of pace.
5. Zig Zag Runs	Flags are placed at 30-50m intervals at angles to each other. The athlete strides to the flag, and then turns and accelerates to the next; then repeats.
6. Jog Back Relays	Four per team, each athlete runs 100m and then jogs back 100m.
7. Fartlek	Speed play away from the track, running at different speeds, i.e. in stages fast, medium or slow.
8. Paarlaufs	Two-person relay teams over distances of either 200m (jog across track recovery), 300m (jog back 100m) or 400m (recovery at finish).
9. Lucky Dip	Distances are written on pieces of paper, e.g. 100m up to 800m. One athlete draws the distance that the group will run; recovery is equal to the distance run. Then another athlete draws a distance and so on.
10. Pyramid Session	Sets of 100, 200, 300, 400, 300, 200, 100, or variations. The recovery is distance run.
11. Up the Clock	60m to 150+m in 10m intervals. Walk back recovery.
12. Handicap Runs	Let the slowest go first, then the next, until the fastest.
13. Distance Runs	Long steady state runs, pulse at about 135 beats per minute (bpm).
14. Mix Ups	Assortment of distances run, e.g. 200m, 500m, 100m, 250m, 60m, 450m, 150m, 600m, 120m. Recovery is jog back distance run. Shorter distances run at a much faster pace.
15. Resistance Runs	Running in sand or water. Pulling a tyre or partner in harness.
16. Reducing Recovery Runs	Distance of 120m is run with 3 min. recovery, and then repeated with the recovery being reduced by 3 secs each time. The recovery can go down and up.

UNIT 4
Walking

Technique:

Competitive walking is an adaptation of ordinary walking. By optimising the movement, longer steps and quicker steps can be achieved resulting in faster walking.

Activities:

1. Walk round area slowly in single file; then gradually increase speed and note what happens!
   - 'Natural walkers' will become apparent.
   - Some will run, i.e. with knees bent.

   How can you ensure that walking takes place?
   - Straighten knees when in the vertical/supporting position
   - Strike with heel on front foot, with toes pulled up towards shin
2. Go back to walking as before in single file and gradually increase speed as before BUT this time *strike with the heel* and see what happens.
   - Natural walkers will increase stride length.
   - Some will speed up, others will pike or lean forwards whilst landing on an almost flat foot.

   Forward lean restricts stride length; backward lean prevents forward movement and, hence, restricts stride length.
3. Work in twos – No. 1 walks length of area, and No. 2 observes and notes good/bad points.
4. Return to walking in single file at steady pace. Practise looking at the back of the head of the person in front to keep an upright position. When this is established, work on arm action:
   - bent at 90° at elbows
   - relaxed shoulders
   - elbows driving back.
5. a) Work in twos – No.1 practises punching higher with hands in front and drives elbows back; No.2 observes what happens. Then students change over.

   Check what happens:
   - Is the student walking taller?
   - Is there a roll onto toe?
   - Is there loss of contact?

   b) Still in pairs – No. 1 tries to walk taller, walk at steady pace and then the command is given to speed up, BUT to lift the chest and drive the arms faster.

   Check what happens?
   - The body comes into a more upright position allowing for a longer stride length (forward hip swing beginning to come into play); faster arms mean faster legs.
6. a) Measure out a 50 metre stretch on a path or playground. Aim to walk this distance in 15-20 seconds. Most will do this time easily, but encourage rhythm and floating effect.

   b) Now measure out a 100 metres stretch or circuit (or up and back) aiming for 35-40 seconds. Again most will beat this, but now rhythm and endurance combined are necessary.

   c) Try 200 metres in 75-80 seconds and the endurance component will become clearer.
7. In small groups (by ability or sex) aim to:

   a) walk 800 metres in under 5 minutes or

   b) see how far you can get in 5 minutes and record this point in readiness for next time. The use of markers is helpful here, e.g. for a 200 metre track, so that pupils have a clear indication of how far they have reached. (See Figure 4.1)

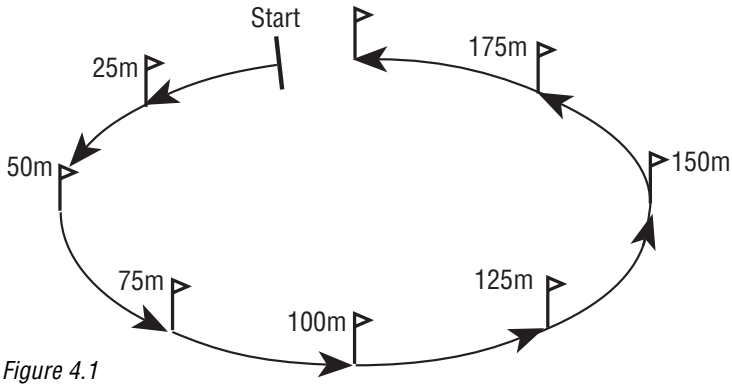


Figure 4.1

SAFETY Race Walking can be done at the beginning and end of lessons which are held indoors, in a gym or a sports hall. A firm surface is required, and most schools will do their athletics on grass which is not really suitable, especially when wet. Additionally, because walking involves a straight leg action, surfaces should ideally be flat.

SIMPLE RULES The rules define race walking as follows:

- A progression of steps so taken that unbroken contact with the ground is maintained.
- During the period of each step, the advancing foot of the walker must make contact with the ground before the rear foot leaves the ground.
- The supporting leg must be straightened (i.e. not bent at the knee) for at least one moment when in the vertical upright position.

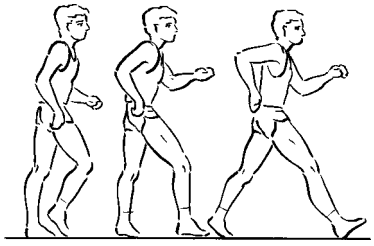
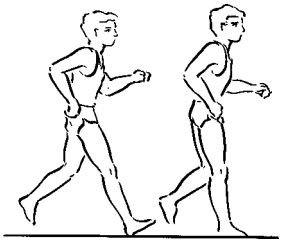
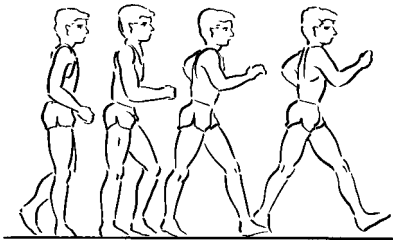
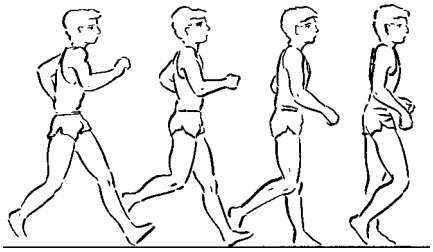
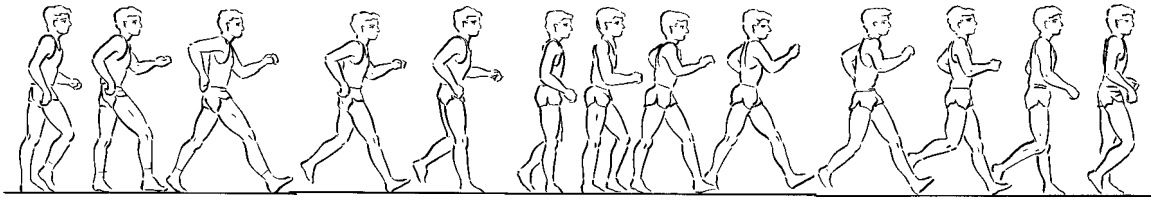
A race walking judge, therefore, has to look for two things to check whether the walker is walking legally or not in terms of:

- contact
- bent leg.

To the uninitiated, the borderline between walking and running is a very tenuous one. At school levels, however, if the judge thinks the walker is not walking legally, then he/she can be disqualified without reference to another judge.

In the race walking Judges are appointed to see that unbroken contact with the ground is maintained.

Table 4.1

WALKING	PHASE	OBSERVATION POINTS	
	DRIVE STRIDE TO DOUBLE SUPPORT	BACK LEG SWINGING LEG ARMS	Back leg straight and driving as foot rolls up onto TOE. Slightly flexed, to SOFT HEEL landing in readiness to roll through to TOE to complete cycle. Bent 90° at ELBOW; relaxed shoulders and pivoting at shoulder for DRIVE.
	SINGLE SUPPORT PHASE	SUPPORTING LEG REAR LEG	Leg must be straightened in vertical (rules); foot must be actively rolled to avoid braking effect. Leg is brought through flexed and fast, close to ground and the supporting leg; this action in combination with arms will induce linear hip action.
	LEGS ARMS	BEGINS WITH ANKLE KNEE HIP AND THEN GOES TO HIP KNEE ANKLE FASTER ARMS/FASTER LEGS	
	PHASE SINGLE	SUPPORT PHASE SEE ABOVE	
Side view 			

Development:

1. Walking with medium strides along a straight line, the walker holds one arm straight by his/her side whilst rotating the other arm in an anti-clockwise direction. This is repeated with the other arm.
2. Walking at a moderate to fast speed and emphasising the correct rolling action of the feet. This means pushing strongly off the rear foot right up until the toes leave the ground and, secondly, making sure that the toes of the leading foot are high on landing so that the landing itself takes place right on the corner of the heel.
3. Walking at a slow to moderate speed and emphasising leg straightening. This means keeping the leg relaxed as it swings through, and then tensing it as the heel touches the ground, keeping the leg braced as it drives the body forwards.
4. Walking at a slow speed with long strides to emphasise forward motion of the hips.
5. Walking at a moderate speed in a snaking path, i.e. rapidly and continuously swinging several yards to the left and then to the right of a straight line. This should help to improve the mobility of the walker's hip joints and his/her sense of balance.
6. Walking at a moderate speed in a figure eight path. This serves the same purpose as (5) but requires better control.
7. Walking at various speeds with special concentration on the correct arm action. In particular, the arm should be pulled virtually straight back with the elbow high. Whilst in front of the body, the hand should not cross the mid-line of the trunk.

UNIT 5
Hurdles and Steeplechase

HURDLES

Hurdling is basically sprinting over obstacles. It is often described as 'rhythm sprinting', the rhythm being imposed by the spacing and height of the hurdle. The event favours the taller, leggier person, but this can be overcome for the purpose of class teaching by positioning the hurdles to suit the physique and ability of the performers.

Full Technique: See Table 5.1.

Basic Technique:
Fear of hitting the hurdles and suffering injury or falling over can often inhibit children from attempting the hurdles. To overcome this difficulty use hurdles at low heights to allow the students to become more confident in the event (see hurdles grid).

TEACHING POINTS

For hurdles competitions, there are set distances and heights for each age group and it is worthwhile marking these distances on the track, in addition to marking out a 'hurdles grid' for class teaching. (See Figure 5.1)

Hurdles Grid (Distances):

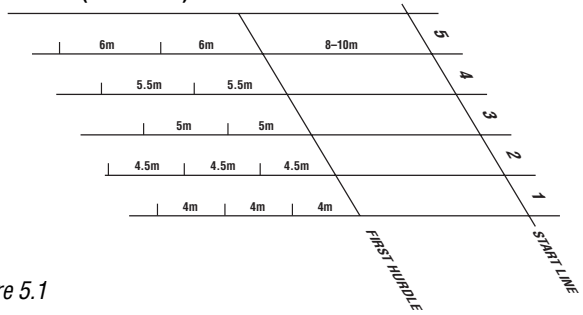


Figure 5.1

Teachers should find the grid produces sufficient challenge with the spacing as illustrated, but this can be changed to suit the age and ability of the group. The height of the hurdle can also be modified to ensure a degree of success.

The fundamental skill of hurdle speed can be introduced by challenging the novice hurdlers to get the front foot down on the far side of the hurdle before the teacher blows a whistle in a time of five seconds, e.g. over two hurdles. Again this can vary according to the age group and number of hurdles available.

Encourage pupils to try to progress to lane 5 of the grid as soon as their stride pattern allows, i.e. when they can run smoothly with three strides.

THE EQUIPMENT

The standard hurdle is illustrated in Figure 5.2, but in order to save money hurdles may be improvised, as in Figs. 5.3 and 5.4.

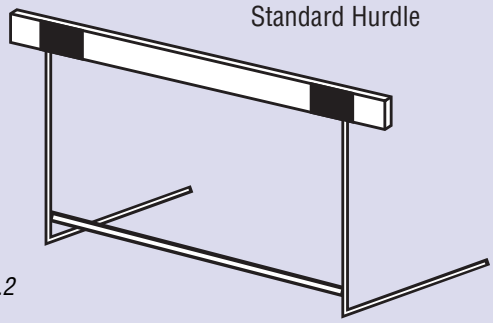


Figure 5.2

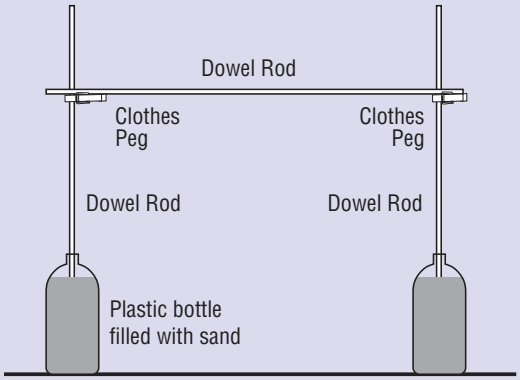


Figure 5.3

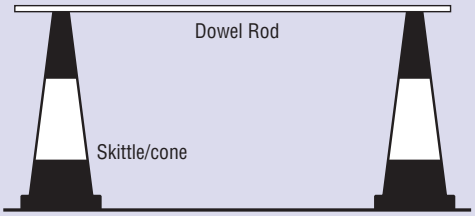
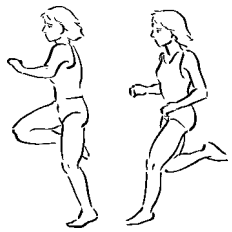
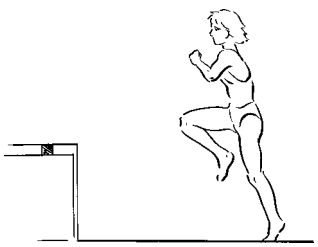
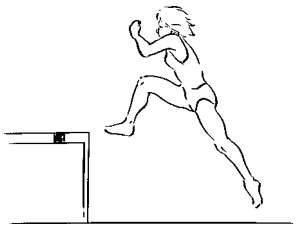
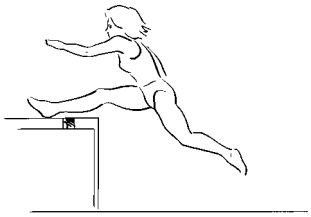
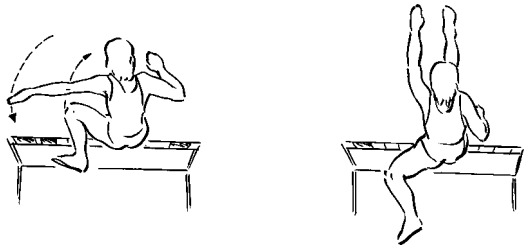
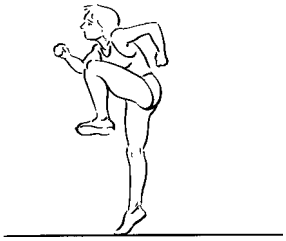


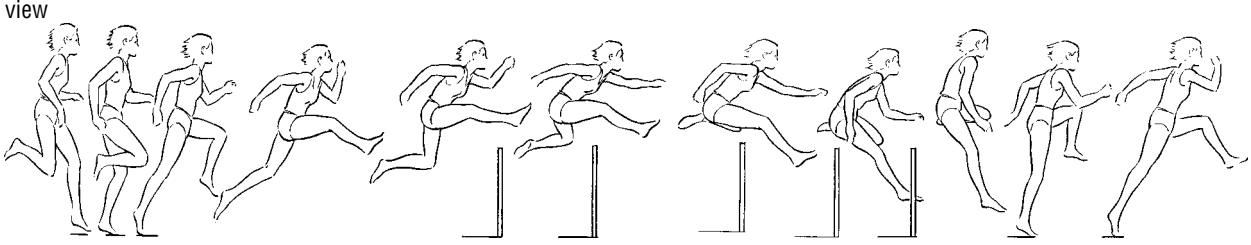
Figure 5.4

Table 5.1

HURDLING	PHASE	OBSERVATION POINTS
	TALL AND BALANCED	Be tall coming into hurdles. Run on toes. Feel totally balanced.
	DRIVE	Drive knee at hurdle. Foot cocked under knee. Do not sink or drop hips.

HURDLING	PHASE	OBSERVATION POINTS
	EXTEND	Drive and extend off rear leg. Press into hurdle. Drive lead heel at the hurdle.
	REACH	Reach across the hurdle. Drive hips through the hurdle. “Hook” lead heel over hurdle (i.e. downfast).
	REACH AND PULL	Reach and pull with opposite arm to lead leg. Keep trail heel tight as knee is pulled round and through. Keep trail knee higher than trail foot.
	LANDING	Stay tall. Pull trail knee right around into line of running before putting it down. Keep trail foot cocked and tight under knee.
	RUN AWAY	Drive and extend away from hurdle off straight lead leg. Keep hips in front of lead foot – do not sit! Good use of arms/elbows to drive into sprint action again.

Side view



Lead up skills

1. Students run over the hurdles to establish which leg they prefer to cross the hurdle first (3-4 runs).

   Establish this as the **Lead Leg.**

2. Lead leg action: the leg must be picked up fast, and bent at the *knee;* then the *heel* is driven across the hurdle (3-4 trials).
3. Trail leg action: as the lead leg returns to the ground the TRAIL LEG swings out to the side of the body flexed at the *knee* and the knee pulls the *foot* through, (3-4 trials).
4. Arm action: synchronised with the legs during barrier clearance and running action.
5. Fast hurdling: the lead leg is important here; once the *heel* is over the hurdle, *snap* the leg down *fast* to the ground. *Fast* leg up, *faster* leg down (3-4 trials).
6. Also encourage a *leaning* drive at the hurdle, leaning from the waist, not the shoulders (3-4 trials).
7. Starting: most athletes take 8 strides to the first hurdle; therefore trail leg up to the start line with lead leg to the rear. Practise 8 stride approach to first hurdle with clearance (3-4 trials).
8. Competitive element: challenge pupils to get lead leg on the ground on the far side of the hurdle within 3 seconds of the start (or within an achievable time limit so that everyone is successful).
9. Starts over 2 and 3 hurdles against a time challenge, e.g. 5, 6 or 7 seconds.

Development:

1. Isolate the **lead leg** action. If leading leg is the left one, run down the right hand side of the hurdle. As each hurdle is approached, the action of the lead leg can be examined carefully.

   Observe fast lead leg action with knee coming up in line with the body, i.e. picked up directly in front of the runner.

2. Isolate **trail leg** action by running down the other side of the hurdle. Encourage pupils to bring knee through high and fast to the next full stride.

ACTIVITIES

1. Over hurdles, around cone and sprint back to next runner. (see Figure 5.5)

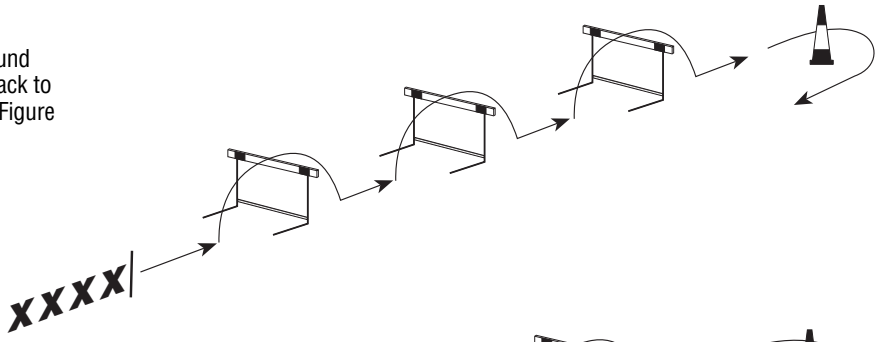


Figure 5.5

2. Over hurdles going down, around cone and over hurdles on the way back. (See Figure 5.6)

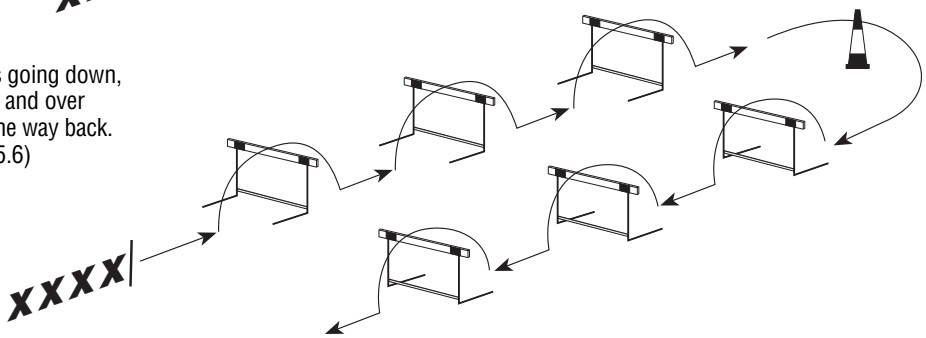


Figure 5.6

3. As 2 but there is a group at the far end. (See Figure 5.7)

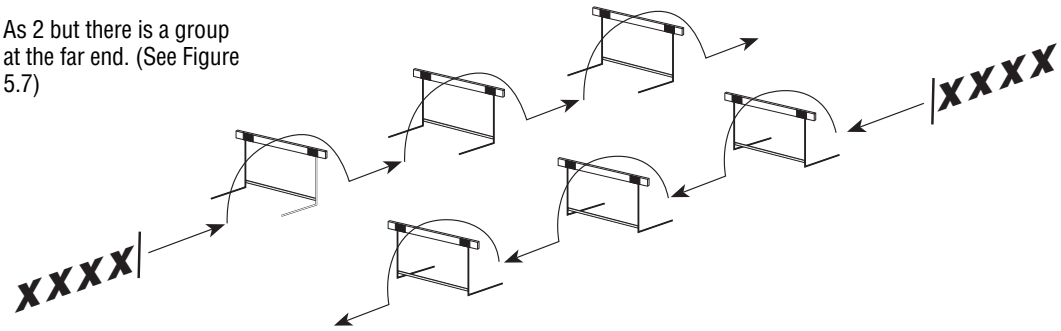
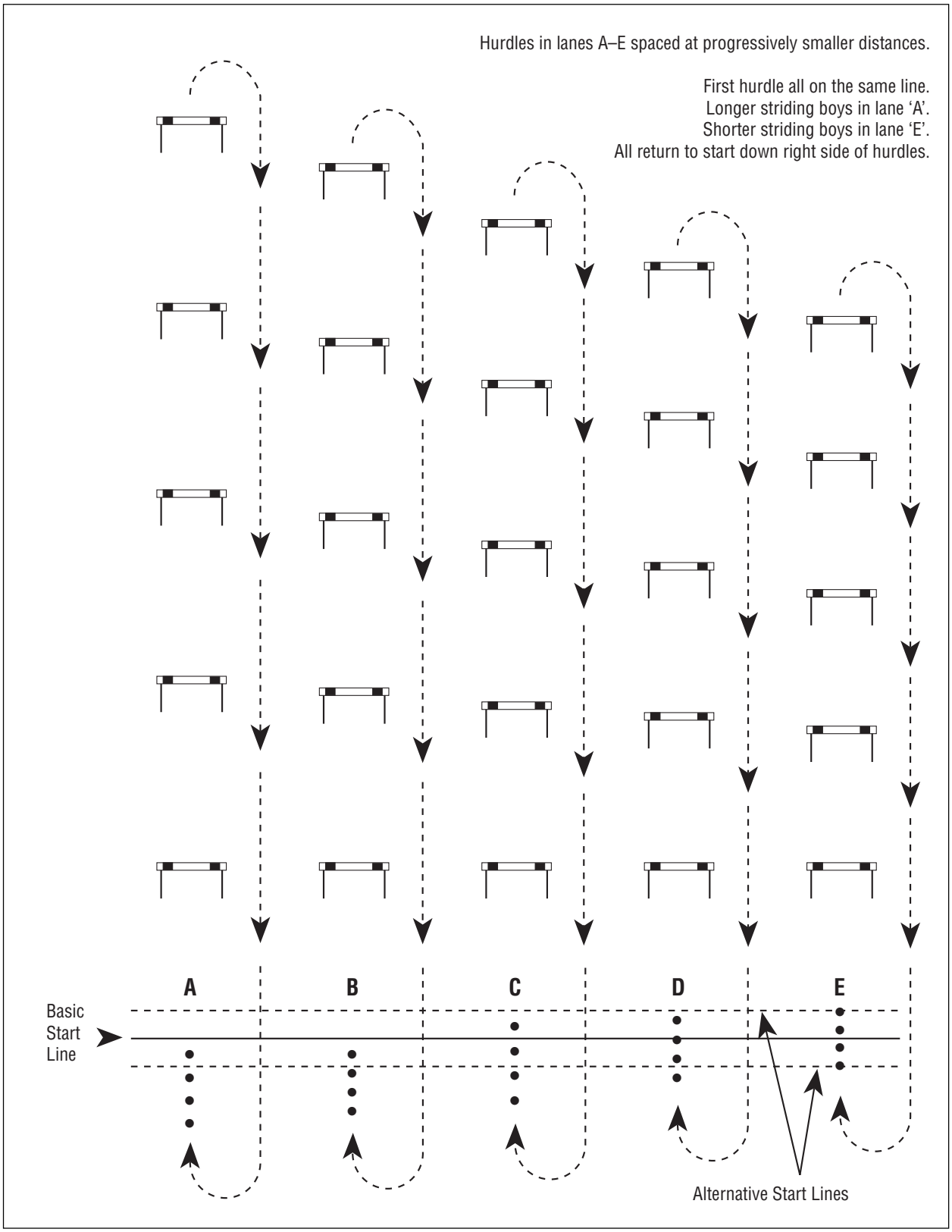


Figure 5.7

Figure 5.8 below illustrates a suggested layout for class teaching.

Figure 5.8



SAFETY

Hurdling is dangerous on wet grass or on uneven surfaces. The hurdle should be free to fall if struck, and athletes should approach with the feet of the hurdle pointing towards the hurdler.

Never let pupils run over hurdles from the opposite direction. (See Figure 5.9)

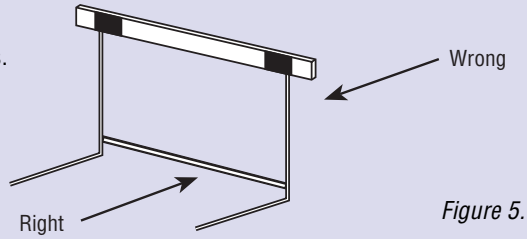


Figure 5.9

STEEPLECHASE

Aim:

To complete the race in the fastest possible time allowing the barriers and water jump to interfere as little as possible.

Technique: See Table 5.2.

N.B. Steeplechasers require not only an endurance background, but also good hip mobility, as good hurdle technique is only possible when the runner has a good level of mobility in this joint complex.

TEACHING POINTS

1. Introduce the technique using ordinary hurdles.
2. Use low hurdles in the first instance.
3. Ask the students to run over the hurdles and **not** to jump them.
4. Develop the same lead leg technique by placing hurdles at a set distance and asking students to take 3, 5 or 7 strides between them.
5. An alternate leg lead can be developed by using 4, 6 or 8 strides.
6. As a set rhythm is developed, the barriers should be increased until they reach 91.4cms (3'), the height barrier. (See Figure 5.10)

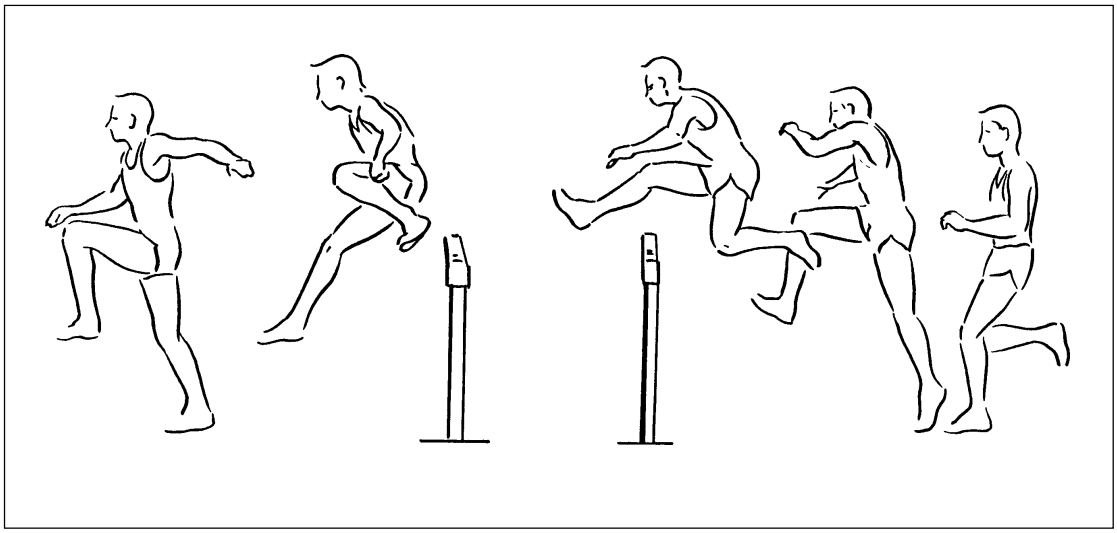


Figure 5.10

WATER JUMP TECHNIQUE

1. This is best taught by using a low barrier such as a gymnastics box top or bench and gradually increasing the height to 91.5cm.
2. A barrier placed over a long sandpit may be used instead of an actual water jump.
3. It is essential to maintain rhythm throughout the action, "step on – step off".
4. When this is mastered the students should be asked to leave the foot longer in contact with the hurdle, this will help to develop the "split" off the top of the barrier. (See Figure 5.11)

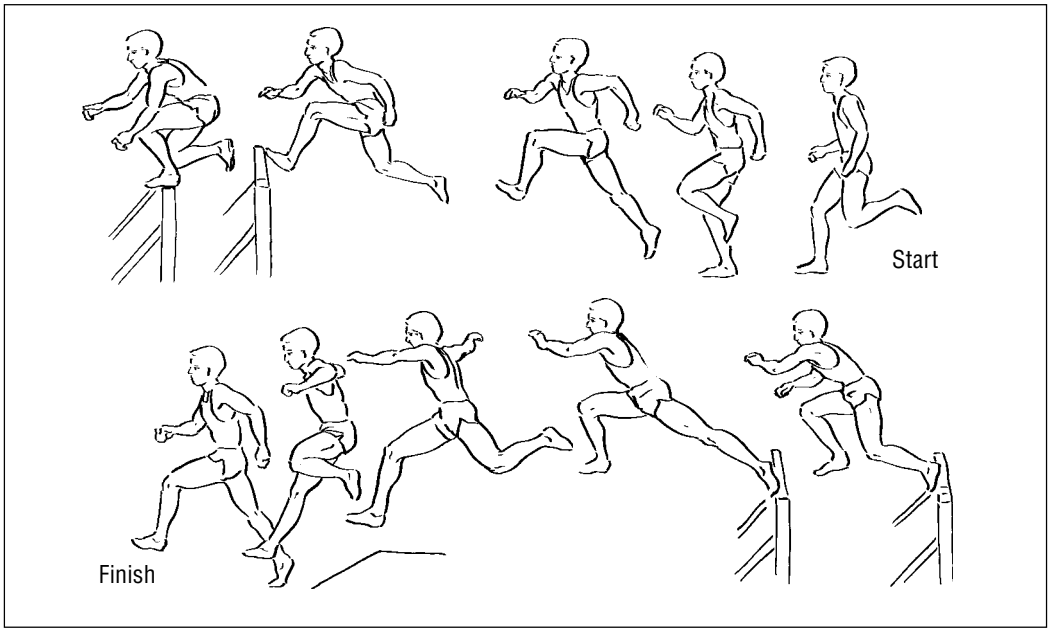
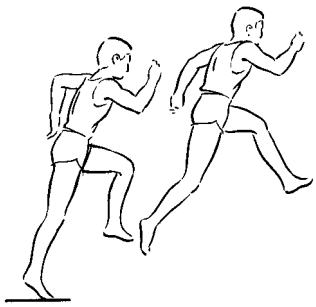
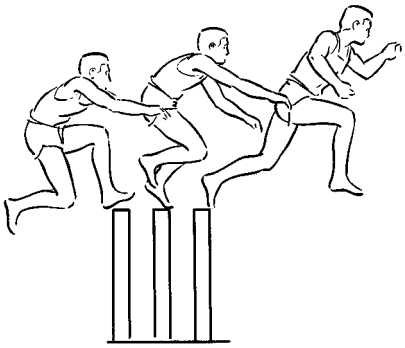
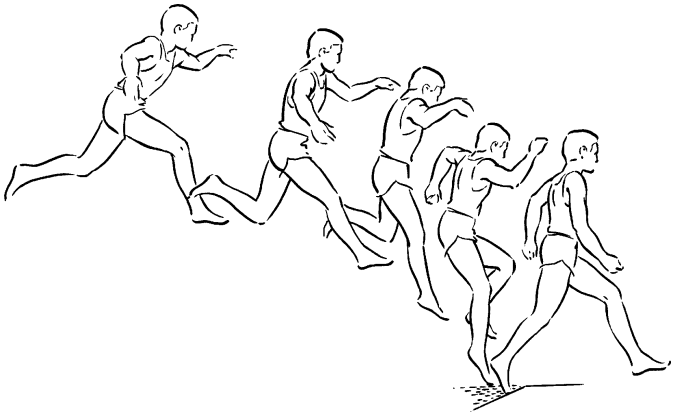
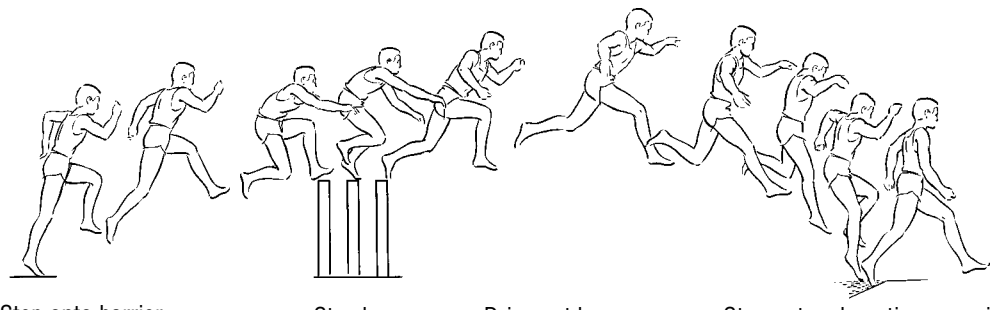


Figure 5.11

Table 5.2

STEEPLECHASE – WATER JUMP	PHASE	OBSERVATION POINTS	
	APPROACH TO BARRIER	BODY LEG ARMS	Adjust stride to get close to barriers. Drive up and forwards with bent knee. Drive opposite arm to lead knee.
	STEP ON AND PUSH OFF	FOOT LEG BODY	Lead foot is placed firmly on barrier. Push off edge of barrier ensuring full leg extension. Keep low passing over barrier.
	CLEARING THE BARRIER	LEG FOOT BODY ARMS	Bring leg through to strike track beyond water. One foot lands in edge of water. Step out of water and continue running. Use arms to balance on landing.



Step onto barrier | Stay low | Drive out low | Step out and continue running

INTRODUCTION TO THE FIELD EVENTS

The field events include all the jumps and throws and, unlike running, involve a high degree of technical skill to carry them out. Additionally, the field events often require costly equipment and relatively complex field markings. However, it must be remembered that it is always possible to improvise, and to modify and develop cheaper forms of equipment. This text makes reference to how to make equipment suited to class teaching of these events. However, if students are to take part in competitive athletics it is vital that they have experience of working with the correct equipment. If this is impossible for the school to provide, staff should seek out partnership opportunities with local clubs, colleges and other higher education institutes, and see whether some reciprocal arrangement can be reached which will provide extended opportunities for those students who wish to progress in the sport.

One of the most important aspects of field athletics is the inherent dangers of the different events. While not wishing to overstate the case, staff must be aware of the potential problems and take all steps to follow the simple safety guidelines outlined in this text.

Field events, by their very nature, present students with skill challenges which can give both fun and satisfaction and, provided they are safely taught, can provide a valuable contribution to the all-round motor development of students within the physical education curriculum.

INTRODUCTION TO THE JUMPS

Basic Principles of Jumps
All jumping events have a common pattern, with each event having the following parts:

1. An approach run, in which optimum speed (high jump) or maximum controlled speed (pole vault, long jump and triple jump) is required.
2. A take-off, in which each event has its own specialist requirements.
3. A flight through the air, in which each event also has its own specialised requirement.
4. A landing, where each event requires either technical efficiency to gain maximum distance (long jump and triple jump) or safety in landing from a height (pole vault and high jump).

Approach run requires:
- speed and rhythm on run way
- correct postural adjustments during the run
- accuracy at the take-off point.

Take-off requires:
- slight heel-toe foot plant (the sensation should be a flat foot take-off)
- full extension of the take-off leg
- active use of the free leg
- active use of arms
- steady erect posture of head
- stable flat back.

Flight:
- After take off the flight path of the centre of gravity cannot be changed (except in pole vault).

The alteration of body position in the air can give:
- more efficient bar clearance (high jump and pole vault)
- more balanced landing position (long and triple jump) and hence increased distance.

Landing:
- In long and triple jump efficient landing is needed for maximum distance.
- In pole vault and high jump, a SAFE landing position is essential.

UNIT 6
Long Jump

Aim: To achieve the maximum distance between take-off and landing.

Full Technique: See Table 6.1.

Basic Techniques: Long jump is the successful linking of speed and lift. Speed is developed in the approach run, lift by a powerful thrust of the take-off leg and fast drive of the free leg, balanced by the arm action.

Approach run:
- An accelerating run with maximum controllable speed at take-off.

Take-off:
- A slight heel-toe rocking action on take-off foot.
- The free thigh is driven upwards and forwards.
- The take-off leg extends vigorously.

Flight:
- In the first phase the take-off position is maintained.
- At the apex of the jump the body shape should be long and thin to prevent forward rotation.
- Prior to landing the feet move ahead of body.

Landing:
- As the heels break the sand there is flexing of ankles, knees and hips to absorb the shock.
- The arms swing forward in an attempt to rotate the body forwards over the feet.

TEACHING POINTS

1. Use a shortened approach run plus a ramp or "beat board" to assist lift.
2. Use guidance such as "knee up, head up, chest up".
3. In the early stages do not be overly concerned with accuracy off the board.
4. Use a take-off zone instead of a board.
5. Measure the distance from take-off to landing.
6. With better students introduce the use of the board.
7. Work from short runs (5-7 strides).

The *good* school jumper will use approximately a 17-stride approach, a novice no more than 13 strides.

Activities:

1. A 3-jump aggregate competition.
2. An aggregate right/left leg competition.
3. A team competition by adding team members' jumps.

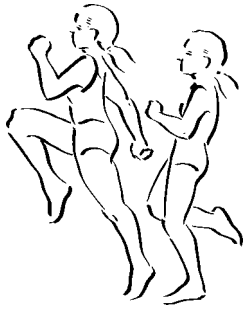
SIMPLE RULES

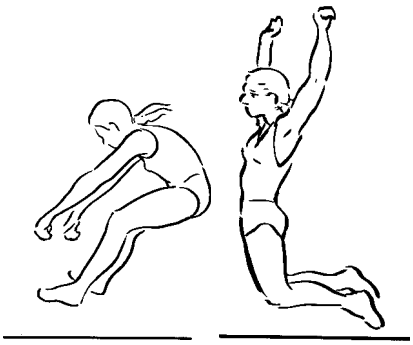
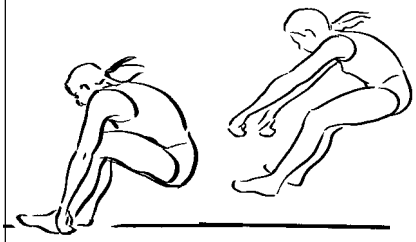
- Take-off must be from behind a scratch line.
- Measurement is made from the nearest break in the sand, by ANY part of the body.
- Read from the tape ZERO in the sand to where it crosses the scratch line.
- Best of 3-6 jumps to count.
- A tie is settled by taking the second longest jump.

SAFETY

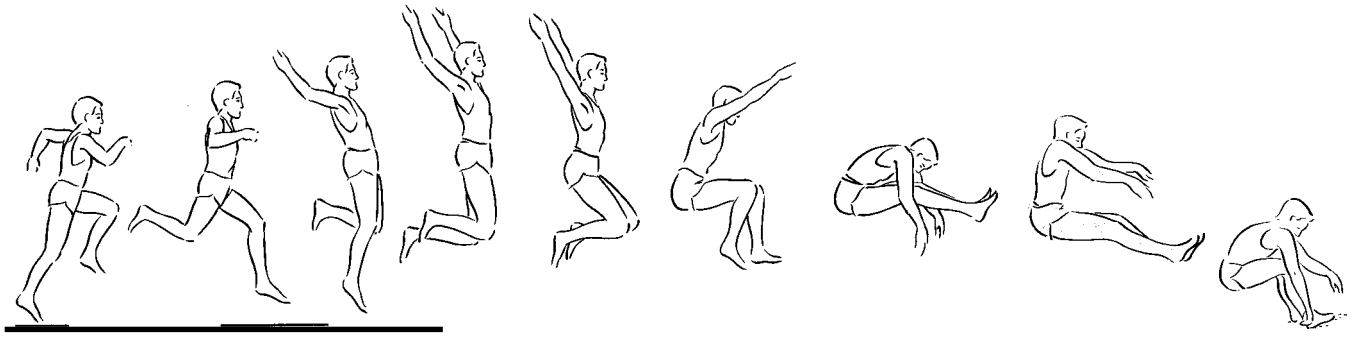
- Keep the pit well dug.
- Keep the pit free of foreign objects.
- If a board is used, check that it is flush with run way.
- Make sure run way is level and firm.

Table 6.1

LONG JUMP HANG STYLE	PHASE	OBSERVATION POINTS	
	PLANT	TAKE-OFF LEG BODY ARMS	Flat foot-toe take off. Slight sink of hips (this should not be taught, but should happen naturally). Co-ordinated with legs.
	TAKE-OFF	TAKE-OFF LEG FREE LEG BODY ARMS	Maximum extension through hips, knee, ankle, toe. Free knee driven vigorously upward and forwards. Chest and back straight, eyes looking ahead. Active drive – co-ordinated opposite arm with leg.
	FLIGHT ONE	TAKE-OFF LEG FREE LEG BODY ARMS	Maintain take off position. Maintain take off position. Upright or slight backward lean. Relaxed.
	FLIGHT TWO	TAKE-OFF LEG FREE LEG BODY ARMS	Relaxes and drops back. Pulled through. Long thin position in the air. Co-ordinate with legs for balance.

LONG JUMP HANG STYLE (CONTINUED)	PHASE	OBSERVATION POINTS	
	FLIGHT THREE	TAKE-OFF LEG FREE LEG BODY ARMS	Pulled through → knees to chest. Pulled through → knees to chest. 'Hang' shape adopted; then bend at waist. Reach high.
	LANDING	LEGS BODY ARMS	Reach out with heel, bend on contact with sand. Lean forwards. Reach forwards.

Side view



UNIT 7
Triple Jump

Aim:	To maintain speed and balance over three phases to achieve the maximum distance possible within the rules.
Full Technique:	See Table 7.1.
Basic Technique:	The event has three phases:
The Hop	• Culminates from a fast controlled approach run. The hop is flat and balanced, with an active landing.
The Step	• Is an extended balanced movement with an active landing.
The Jump	• Uses all the remaining speed to propel the student into the pit.

Balance is achieved by correct use of the arms and good posture. Active landings are achieved by preparing to strike the ground downwards and backwards prior to ground contact.

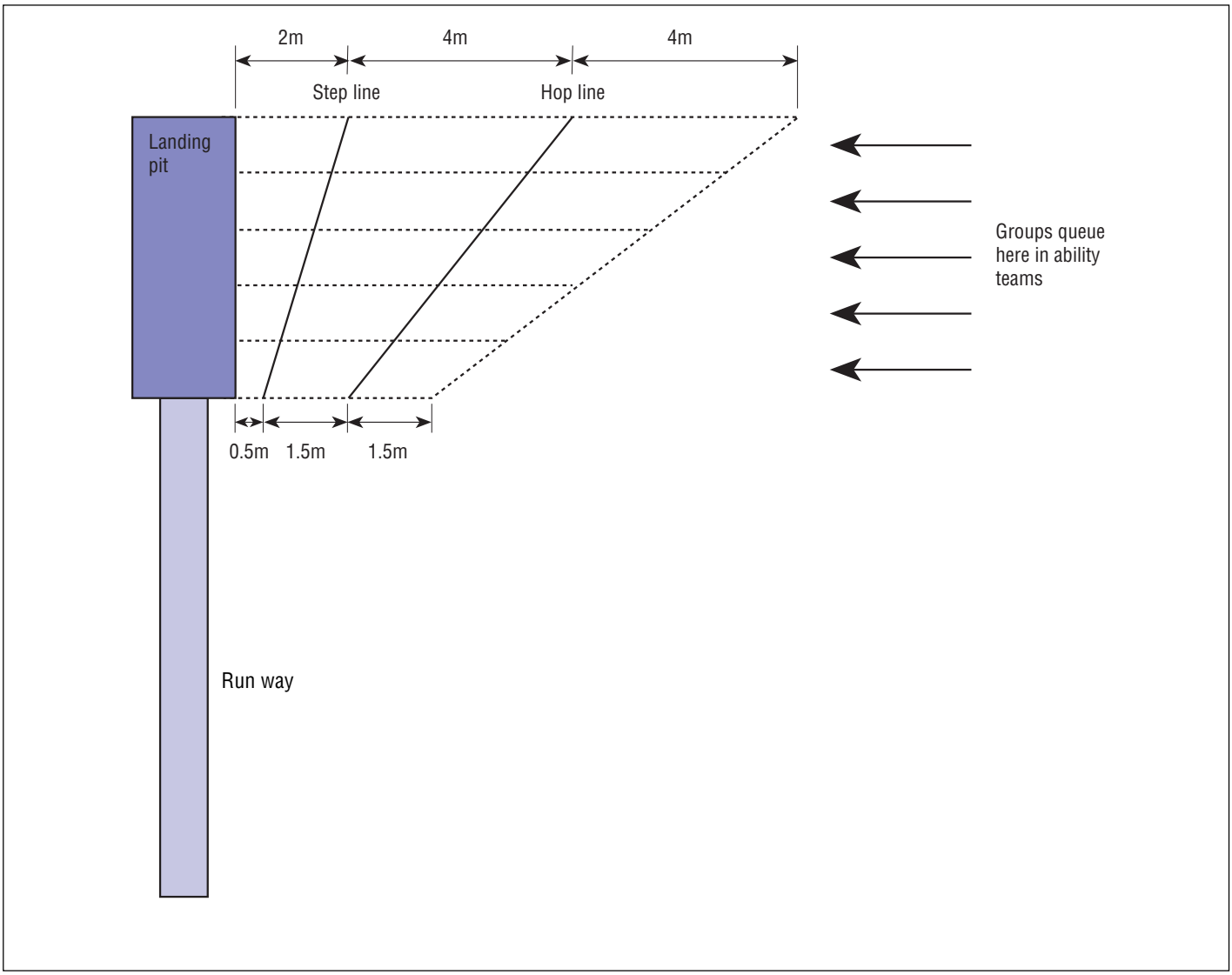


Figure 7.1

TEACHING POINTS

1. Teach from a standing position.
2. Use the lanes of the track and:

   Take off from stronger leg, hop and land on SAME leg on next lane line. Return to the start and repeat but add a step onto the next lane line, landing on the OTHER leg.

   Repeat as above but hop, step and jump onto the next lane, landing with feet TOGETHER.
3. Use the rhythm:

   "SAME, OTHER, TOGETHER"
4. Build by using a 5-7 stride approach run. To do this use a triple jump grid. (See Figure 7.1)

As students progress, show aptitude and/or interest, increase the approach run as for long jump.

Activities:

1. Work indoors using gym mats for landing, and a crash mat for the final landing.
2. Work from standing and short approach runs.
3. Use combination jumps:
   a) 5 hops
   b) 5 steps
   c) hop, hop, step, step, jump
   d) hop, hop, step, hop, hop, step
   e) 3 bunny jumps (610mm to 610mm)
   f) 5 bunny jumps

Encourage students to make up combinations of jumps.

N.B. Check for absorption quality of the students' trainers as this work can be stressful on feet, ankles, knees, hips and spine.

SIMPLE RULES

For basic rules, see long jump plus:

- "Sleeping" leg must NOT contact the ground.
- Markers may not be placed on the run up.

SAFETY

- Keep the pit well dug.
- Keep the pit free of foreign objects.
- If a board is used, check that it is flush with run way.
- Make sure run way is level and firm.

TRAINING IDEAS: LONG JUMP AND TRIPLE JUMP

All the training ideas described in this text are for use with young club athletes, but may also be applicable to work with students.

Winter Session 1

Warm up

1. 8 skip drills emphasising thigh parallel to ground. Repeat 12 times.
2. 12 short approach jumps for technique.
3. 4 x 120 metres sprint with walk back recovery (in winter). 4 x 60 metres sprint with walk back recovery (in summer).

Warm down

Winter Session 2

Warm up

1. Mobility exercises.
2. Sprint drills.
3. Rhythm run on the approach run.
4. Light hopping and bounding drills – 12 ground contacts each exercise.

   Examples:
   12 x hopping right leg
   12 x hopping left leg
   12 x giant steps

   This constitutes one set. Start with 2 sets.

Warm down

Summer Session 1

Warm up

1. Mobility.
2. (4 x skip drills for technique) x 12 ground contacts.
3. Jumping: 3 x 7 stride approach, 3 off 11 strides and once per fortnight 2 off full approach.
4. 4 x 60 metres at relaxed speed.

Warm down

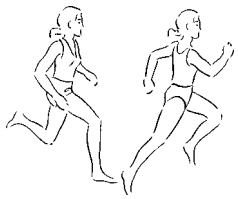
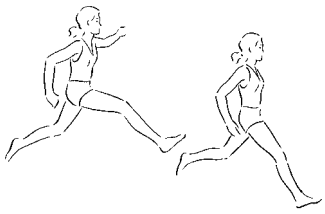
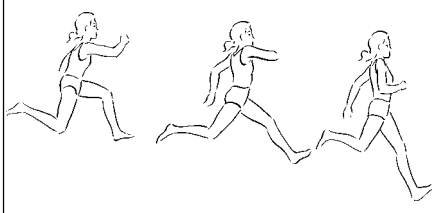
Summer Session 2

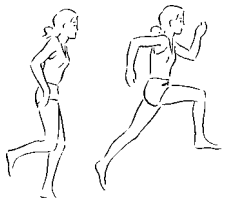
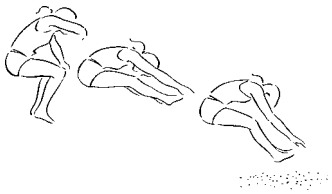
Warm up

1. Mobility followed by sprint drills.
2. 4 x rhythm runs on the run way.
3. 4 x accuracy runs on the run way.
4. Light bounding activities.

Warm down

Table 7.2

TRIPLE JUMP	PHASE	OBSERVATION POINTS	
	TAKE-OFF 1	FOOT LEGS FREE LEG BODY	Flat foot contact. Full extension through hips knee, ankle toe. Free knee and opposite arm driving forwards. Back and chest straight.
	FLIGHT 1	LEGS BODY ARMS	Free knee sweeps backwards. Back and chest straight. Co-ordinated, with legs used as counter balance.
	LANDING/ TAKE OFF	TAKE-OFF LEG BODY ARMS	Active landing/take-off down and back - flat foot contact. Back and chest straight. Co-ordinated, with legs used as counter balance.
	TAKE OFF 2	FREE LEG TAKE-OFF LEG BODY ARMS	Pulls through fast. Extension through hips, knee, ankle, toe. Back and chest straight. Co-ordinated, with legs used as counter balance.
	FLIGHT 2	FREE LEG TAKE-OFF LEG BODY ARMS	Knee remaining high. Bent back of knee. Back and chest straight. Co-ordinated, with legs used as counter balance.

TRIPLE JUMP	PHASE	OBSERVATION POINTS	
	LANDING 2 TAKE-OFF 3	FREE LEG TAKE-OFF LEG	Becomes take-off leg; reaches forward – drives back and down. Flat foot contact becomes free leg - pulls through fast.
	FLIGHT 3 LANDING 3	TAKE-OFF LEG FREE LEG FEET BODY ARMS	Joins free leg. Maintain position. Reach out with heels. Leans forward. Reach forwards.

Side view

UNIT 8
High Jump

Aim: To achieve the highest jump possible within the rules.

Full Technique: See Table 8.1

Basic Technique:

1. Hips and legs must cross the low point of the bar.
2. Vigorous take off, aided by free limbs.
3. Heel/toe rock on take-off.
4. Inside shoulder ***must*** not drop towards bar.

There are 2 recommended techniques:

Scissors

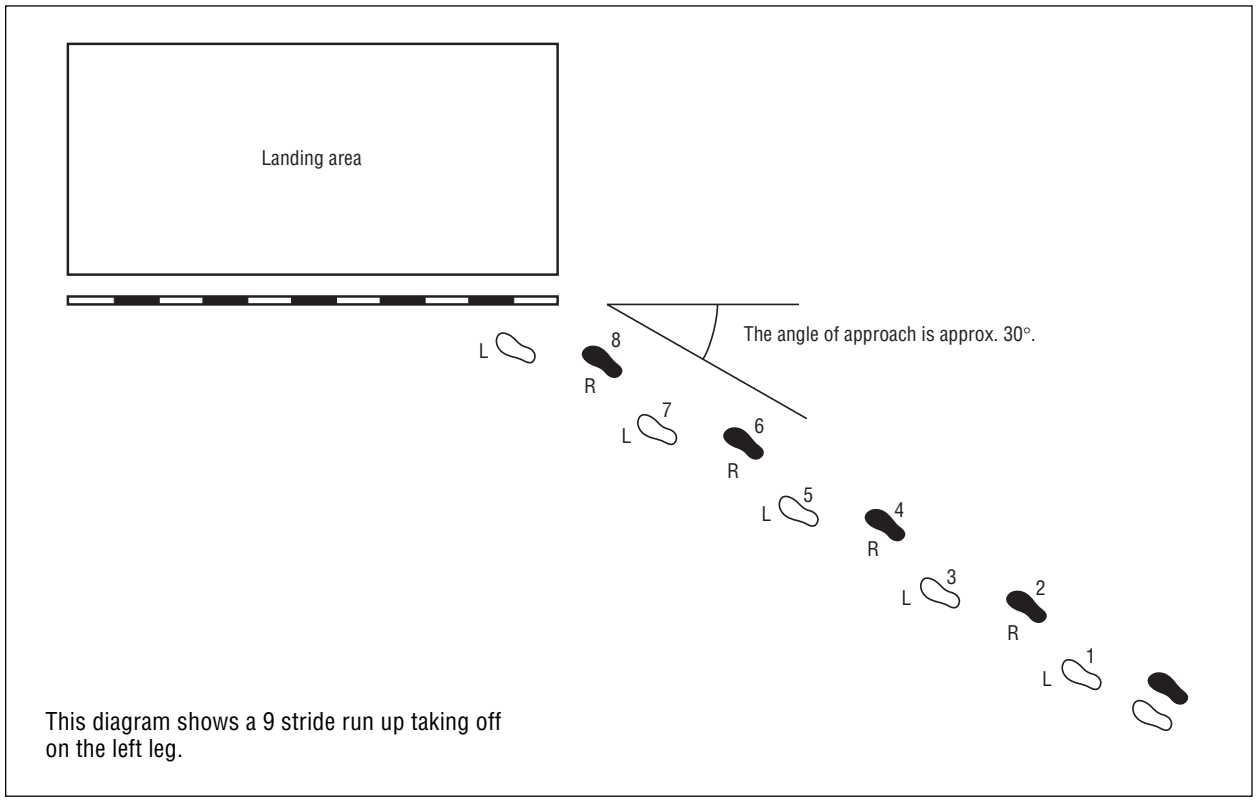
Fosbury Flop

N.B. ONLY SCISSORS CAN BE TAUGHT USING A SAND PIT. TO TEACH THE FOSBURY A FOAM RUBBER LANDING AREA MUST BE USED.

Scissors:

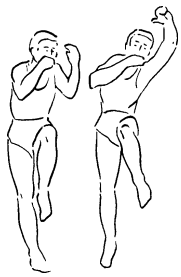
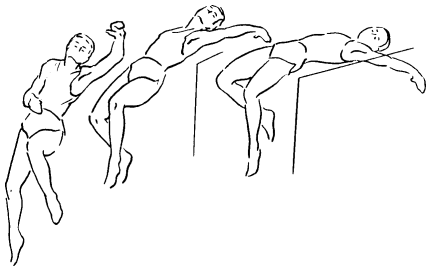
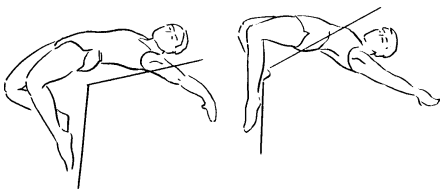
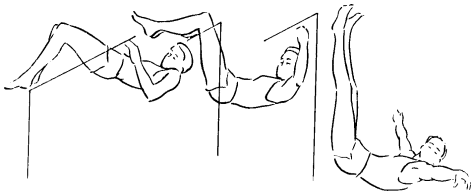
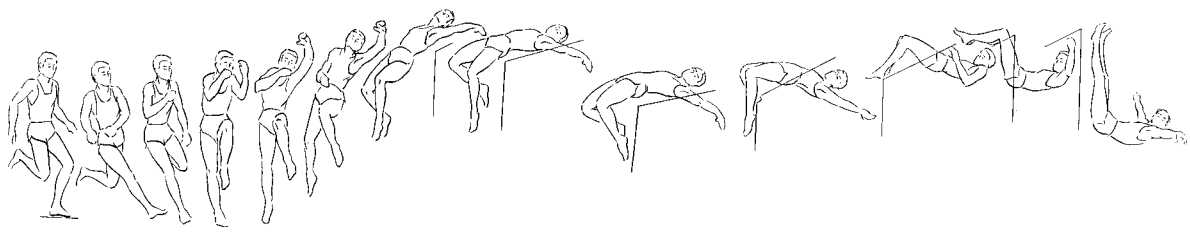
1. Students run and jump for height to establish take-off leg.
2. Left leg take-off run from right.
3. Right leg take-off run from left.
4. Approach from an angle of approximately 30°. (See Figure 8.1)
5. Run from a starting point and stress use of free (straight) leg and full extension of take-off leg.
6. As free leg swings over the bar, the take-off leg does the same.
7. Landing in the sand is *ON THE FEET.*

Figure 8.1



This diagram shows a 9 stride run up taking off on the left leg.

Table 8.1

HIGH JUMP	PHASE	OBSERVATION POINTS	
	APPROACH	TAKE-OFF LEG FREE LEG BODY HIPS	Strong heel-toe plant. Prepare to drive through. Lean away from the bar; take off foot in front of hips – hips in front of shoulders. Sink ready for lift.
	TAKE OFF	TAKE-OFF LEG FREE LEG BODY SHOULDERS	Fully extended -active take-off. Drive through vigorously – fast and high - bent at knee. Upright. Keep high.
	FLIGHT	HEAD HIPS ARMS BODY	Kept up. Raised. Keep close to body. Relaxed.
	BAR CLEARANCE	HEAD HIPS ARMS LEGS	Pressed down on chest. Pushed up to form a bridge over bar. Kept close to body. Hanging down loosely.
	LANDING	HEAD HIPS BACK ARMS LEGS	Kept pressed down on chest. Bend fast at hips. Absorbs force of landing. Outspread arms to feel for landing. Lower leg lifted by extending knee joint.
Side view 			

Fosbury Flop:

This is a similar event to scissors in that students approach from the same side.

1. Curved approach working off 3 strides, 5 strides and 9 strides. (See Figure 8.2)
2. The inside leg is picked up bent at the knee and across the body (to encourage the body to turn).
3. Full extension of take-off leg through ankle, knee, hips.
4. Raise hips over bar and flick legs over to land on the back or shoulders.

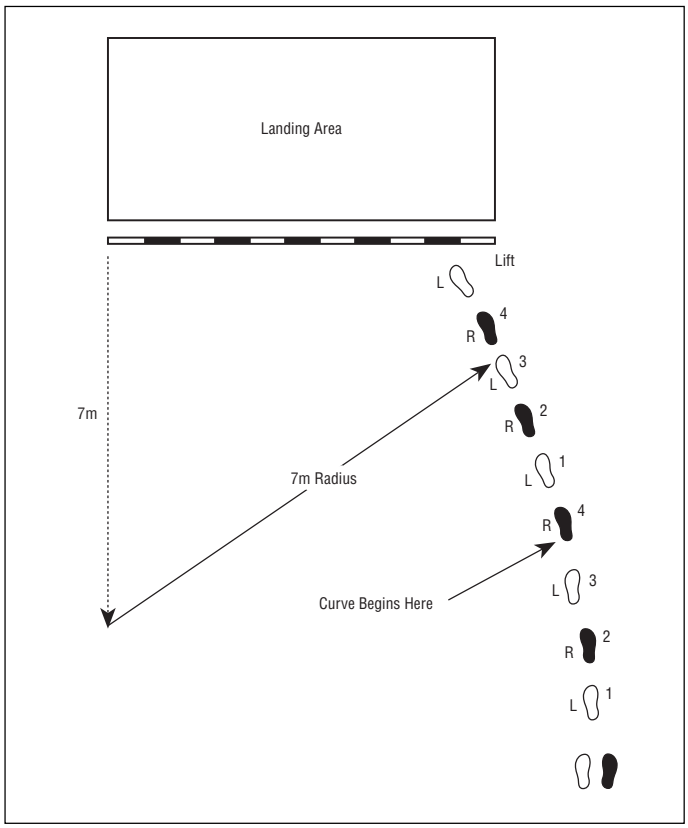


Figure 8.2

TEACHING POINTS

1. Use elastic bars in place of fibre glass **(never metal).**
2. Stress the importance of the take-off. Teach by marking the take-off area in chalk close to the upright, but NOT at the centre of the bar.
3. Start Fosbury style with backwards standing jump as in Figure 8.3.
4. Develop a run up by using 3 – 5 – 9 stride approach.

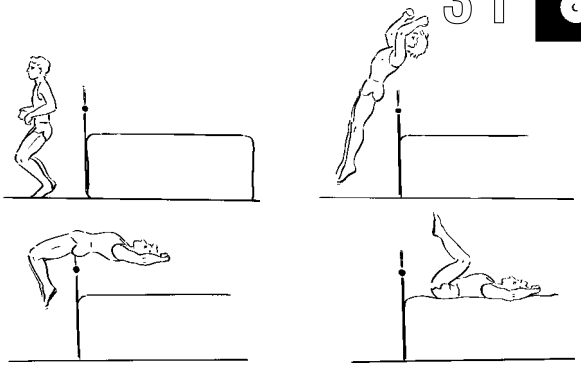


Figure 8.3

Standing with back to bar, the athlete jumps upward and backwards, arching the back to land on the shoulders on the cushion. The starting position is 2 pigeon steps (heel-toe length, i.e. length of foot) from cushion to heel. Look along shoulder at the bar.

Activities:

Practice may be done away from the landing area using practises such as:

1. Long skipping.
2. High skipping.
3. Jumping to touch basketball rim or a soccer goal post.
4. Jumping to touch suspended ball. (See Figure 8.4 below)

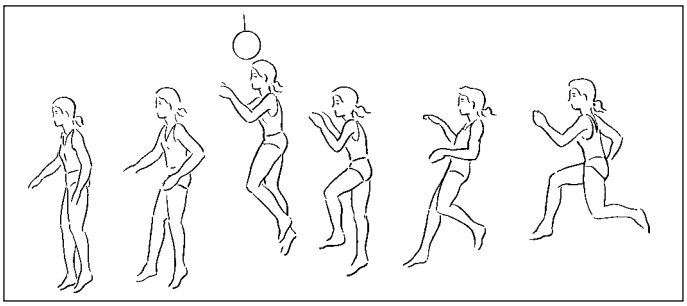


Figure 8.4

5 Suspending a ball approximately 60cm (2') above the heads of the group who are working.

6 Off 3-5 strides, athletes jump from one foot to try to meet the ball with their heads. This should be repeated 10-20 times and used often in training at all levels. Encourage the students to jump straight upwards. (See Figure 8.5)

SIMPLE RULES

- A failure is recorded when a competitor knocks off the bar or breaks the plane of the uprights.
- 3 successive failures at any height result in elimination.

SAFETY

- Only use Scissors in sand landings.
- For Fosbury Flop use foam rubber landing areas; if these are modular they must be strapped together.
- Ensure take-off is firm.

TRAINING IDEAS: HIGH JUMP

Winter Session 1

Warm up

1. High skip drills x 8; emphasise high knee opposite hip to take-off leg. Twelve ground contacts per repetition.
2. 12 x short approach jumping – off 5 strides for technique.
3. 4 x 80 metres sprints with walk back recovery.

Warm down

Winter Session 2

Warm up

1. Mobility.
2. Sprint drills.
3. Approach runs: work on postural changes and change in speed on take-off.
4. Light hopping and bounding drills.

Warm down

Summer Session 1

Warm up

1. Mobility.
2. Skip drills x 4 for technique.
3. Jumping: 6 jumps off a 7-stride approach; 5 off a full approach.
4. 4 x 60 metres relaxed speed.

Warm down

Summer Session 2

Warm up

1. Mobility.
2. Bar clearance drills.
3. Six full jumps working on a particular aspect of technique.
4. Light hopping and bounding activities.

Warm down

UNIT 9
The Pole Vault

Aim: To achieve the highest bar clearance possible within the rules of the event.

Full Technique: See Table 9.1.

Whilst pole vaulting is a very technical event it can be introduced in simple stages to novices and, provided safety rules are adhered to, it is an event which can be taught as part of the curriculum.

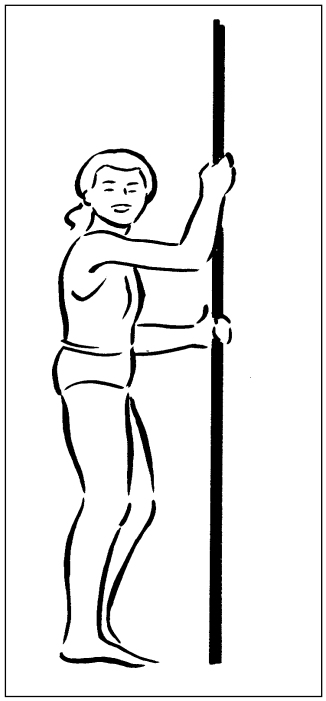


Figure 9.1

TEACHING POINTS (for a right-handed student)

Use a well dug sandpit with wood or concrete edges which are flush with the surrounding ground.

Grip

1. Hold pole vertically with right arm extended upwards and grip the pole with thumb pointing upwards. (See Figure 9.1)
2. At eye level, grip pole with left hand, thumb also pointing to ceiling.

Riding the Pole

3. The student swings on the pole from a single-stride approach. The staff member should ensure that the athlete is taking off from the left foot and passes the pole on the right side.
4. Allow the student to take 2 or 3 strides, plant the pole on the ground or in sand in front of him/her, and 'ride' the pole, i.e. take off on left leg and by holding on to the pole let the pole take the vaulter who swings to land on two feet. The student must let the pole do the work, as this aspect is basic to the event.
5. Progress to vaulting for distance in a long jump pit in order to gain confidence in swinging on the pole. The student lands on two feet facing the same direction as take-off. Repeat this until the student is fully confident and has a balanced take-off and landing. As confidence grows, allow the student to raise hand grip 915mm - 1220mm at a time. (See Figure 9.2)
6. At this stage the student can be challenged by introducing an activity such as 'vaulting the ravine'.
7. Once the student is confident in planting the pole and swinging, the activity can be modified into jumping for low heights over an elastic bar, e.g. 1 metre.

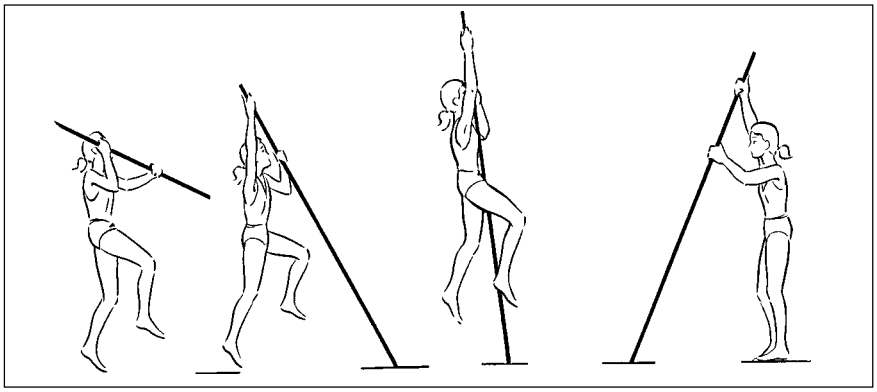


Figure 9.2

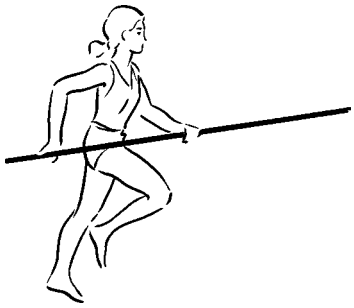
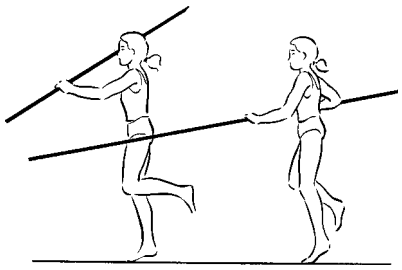
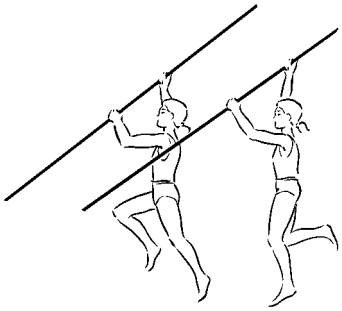
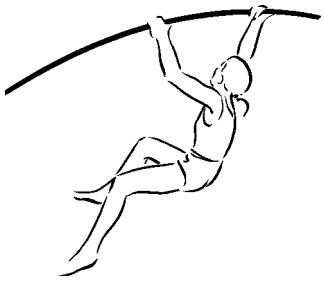
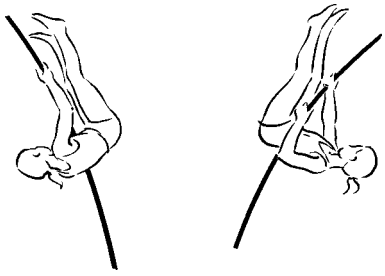
ANY FURTHER DEVELOPMENT MUST BE DONE ON A COMMERCIALLY PRODUCED LANDING AREA SUCH AS THAT PROVIDED AT A LOCAL ATHLETICS CLUB.

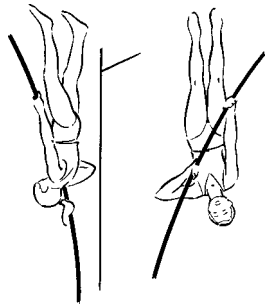
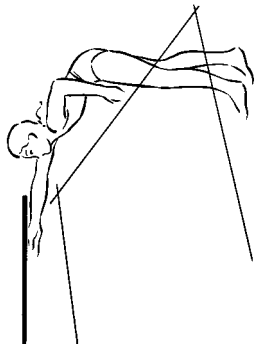
SAFETY

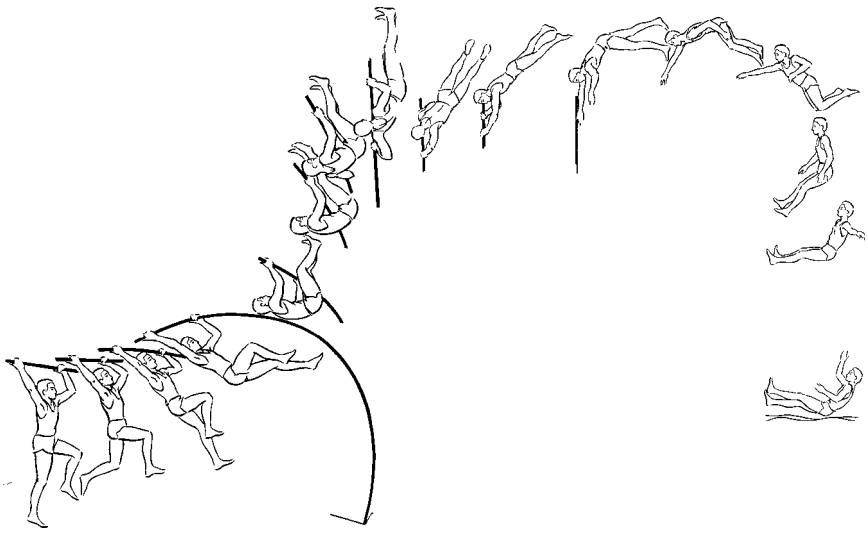
- The standard pole must be used.
- The landing area must be such that it is safe and within the guidelines laid down by the Governing Body (see Safety Measures in Athletics, details at the end of the text).

The technical diagram Table 9.1 refers to an experienced pole vaulter using a fibreglass pole, and is included *for information and analysis only.* It is very unlikely that school students will get beyond point 7 as described in Riding the Pole (page 32).

Table 9.1

POLE VAULT (RIGHT HANDER)	PHASE	OBSERVATION POINTS	
	APPROACH RUN	LEGS BODY ARMS	Normal sprinting action. Straight back and chest. Left arm in front; right hand behind.
	PLANTING THE POLE	LEGS BODY ARMS	Pole plant starts 3 strides out. Upright – eyes looking forward, hips and shoulders square to front – push pole to front-right. Hand reaches high.
	TAKE-OFF	TAKE-OFF FREE LEG BODY LEFT ARM RIGHT ARM	Foot directly beneath top hand. Knee drives upwards and forward. Maintain upright position. Resist pole. Reach high.
	SWING	LEGS ARMS BODY POLE	Maintain take-off position. Keep distance between chest and arms. Hang long. At maximum bend.
	ROCK BACK	LEGS BODY HIPS POLE	Keep legs close to pole – bent. Head in line with body. Lift hips above shoulders. Begin to straighten.

POLE VAULT (RIGHT HANDER)	PHASE	OBSERVATION POINTS	
	ROCK BACK	ARMS LEGS POLE	Pull body along long axis of pole. Keep legs away from bar. Almost straight.
	PULL AND TURN	ARMS LEGS POLE	Keep pulling until lower arm leaves pole. Keep straight but turns towards bar. Straight.
	BAR CLEARANCE	ARMS BODY HIPS	When pull on pole ceases, the push begins. Piked position. High point over the bar.



POLE VAULT: TRAINING IDEAS

Winter Session 1

Warm up

1. Mobility exercises.
2. Gymnastic exercises, e.g. handstand, backward roll, handstand, rope swing and high bar.
3. 4 x 120 metres fast, with walk back recovery.

Warm down

Winter Session 2

Warm up

1. Mobility.
2. Sprint drills.
3. Run ups practising carrying and planting the pole.

Warm down

Summer Session 1

Warm up

1. Mobility.
2. Gymnastic exercises.
3. Vaulting for technique, concentrating on one technical point at a time.

Warm down

Summer Session 2

Warm up

1. Mobility.
2. Sprint drills.
3. Acceleration runs on the run way carrying the pole.
4. Six vaults from run way, concentrating on speed, rhythm and good clean take offs.

Warm down

INTRODUCTION TO THE THROWS

THE BASIC PRINCIPLES OF THROWS

The throwing events can be thought of as growing from a 'common root movement'. This is true in the case of shot, discus and javelin; the hammer rests on similar principles, but must be introduced with a slightly different approach. Using the example of a right handed thrower, the basic principles involved in throwing are:-

- transfer of weight – from right leg/foot to left leg/foot
- build up of speed, slow to fast/low to high; starting low by bending the legs allows the large powerful leg muscles to operate first, gradually building up to an explosive release by arms
- extension of body from ankle → legs → hips → back → chest → arms; work in sequence, each adding speed to the throw
- rotation of right knee/hip towards the direction of throw.

Once the common root movement has been understood, this acts as a reference for the feel of throwing actions.

REMEMBER
When teaching the throws, safety is of vital importance, and staff are reminded that they should always adhere to the basic rules of good practice and safety which are provided in this text.

UNIT 10
Shot Put

Aim: To achieve the longest put possible within the rules of the event.

When introducing shot, it is imperative that great care is taken to ensure that participants are safely arranged and spaced. (See Figure 10.1)

Example of placing and spacing:

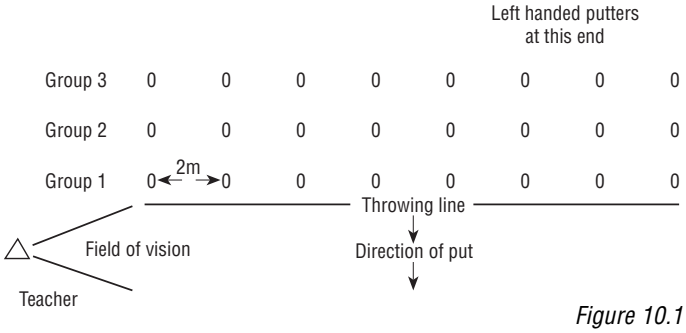


Figure 10.1

Explain to the group that:

- Shots are only to be put on command of teacher: "ready throw".
- Shots may only be collected on command of teacher: "collect shots".

Full technique: See Table 10.1.

Basic technique:

- The basic technique is a throw from a standing put which accounts for about 90% of the distance thrown.
- The student should adopt a "chin – knee – toe" position, all in line with the left toe in line with the right heel. (See Figure 10.2 below)
- From this power position, the right leg drives the hips to the front moving the body weight from right to left leg. When the chest is facing the front, the arm then punches the shot out with the elbow staying high.

Key points:

- chin – knee – toe
- hip drive
- low to high
- left side brace
- arms fast and last – elbow high

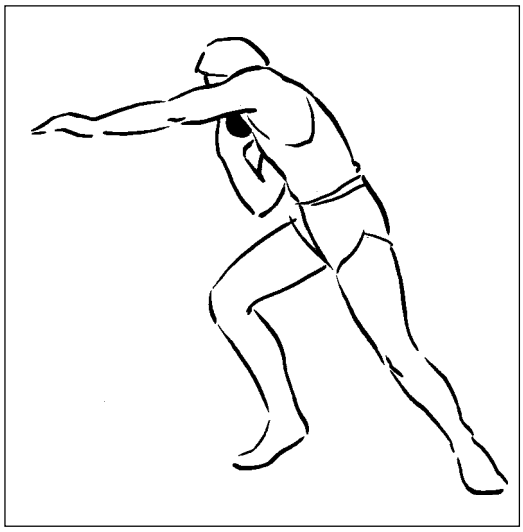


Figure 10.2

TEACHING POINTS

The Grip

1. The shot should be placed at the base of the first three fingers with the thumb and little finger supporting at the sides.
2. Fingers evenly spread.
3. Shot placed under the chin with elbow high.

Standing Put Facing Direction of Put

Using arm only, push shot outwards from chin keeping elbow high.

Standing Put Facing Direction of Put

1. Bend legs, lift and push with arm.
2. After several successful attempts, encourage pupils to bend right leg, turning head and shoulders to face away from throw.
3. Instructions: TURN – LIFT and PUSH.

Standing Put

1. Adopt chin – knee – toe position.
2. Left toe in line with right heel.
3. Feet slightly wider than shoulder width.

The Shift

1. At this stage the type of movement from the back of the circle to the front is not too important so long as the thrower arrives in the chin – knee – toe position.
2. Use sideways action, step back or kick hop backwards (See Figure 10.3).

Activities: (see diagrams Figure 10.4 on page 39)

1. Putting:

a) Overhead for distance.

b) From a kneeling position.

2. Passing and Throwing:

a) Medicine ball pass.

b) Target put – who can throw nearest to a line in the sectors.

c) Two-handed put forwards.

3. Competition:

Sitting shot put competition

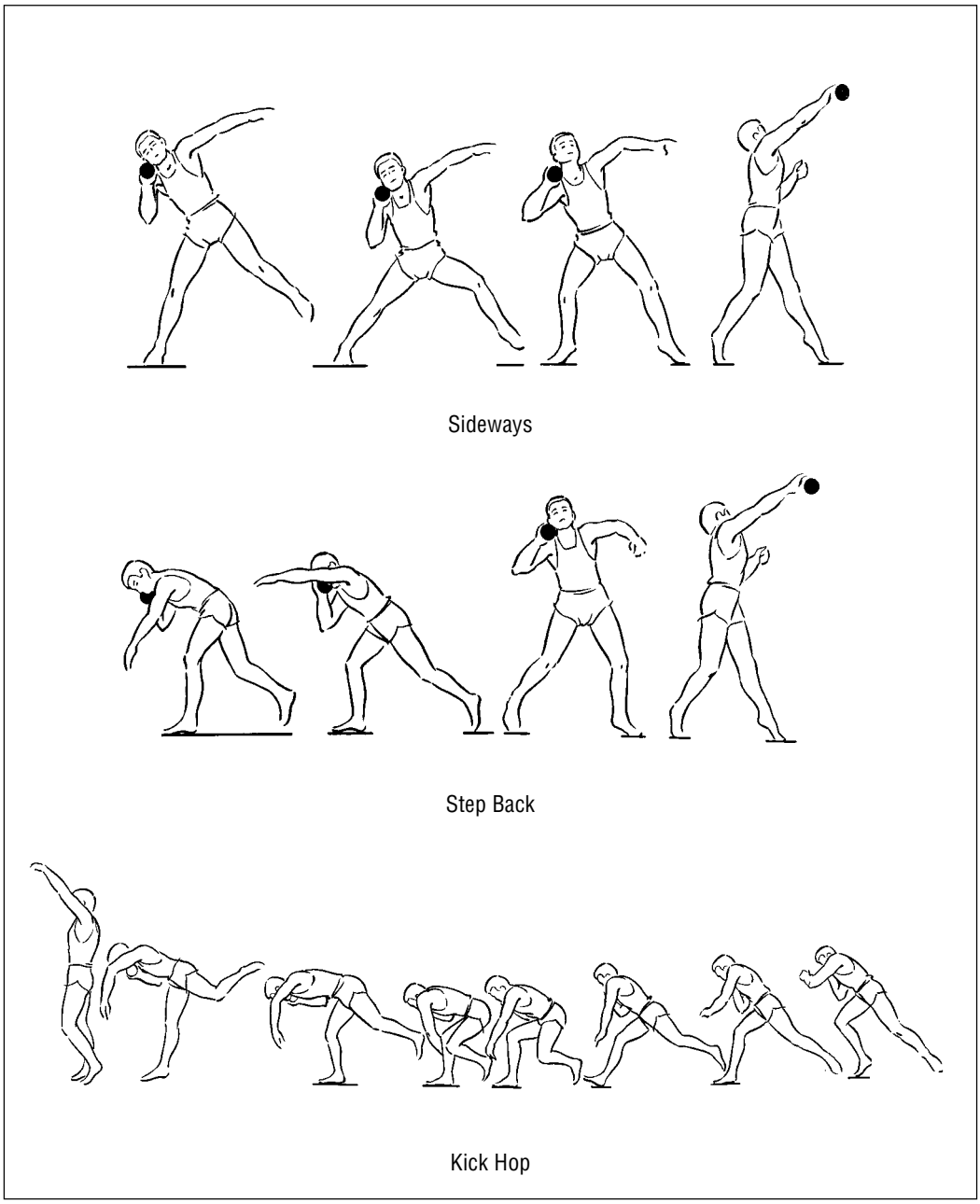


Figure 10.3

SIMPLIFIED RULES

- The put is made from a 7' (2.135m) circle with a wooden stopboard (10cm high) at the front.
- The putter must commence the throw from a stationary position and leave the circle under control, from the rear half.
- The shot must be put with one hand, from the shoulder close to the chin.
- The shot must land within a 40° sector; the distance is measured from the landing point closest to the circle

SAFETY

- Putting is a perfectly safe activity, but one which can be deadly. (The origins of some putting implements were used for killing or injuring). Always ensure that pupils are placed in safe environments created by common sense rules, such as:

  "ALL THROW – ALL RETRIEVE"

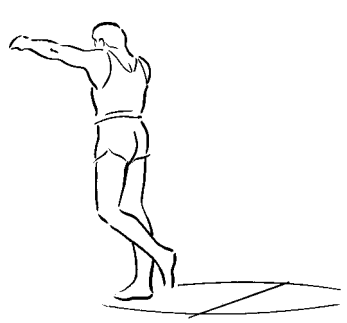
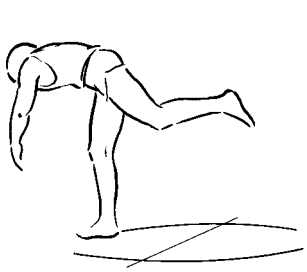
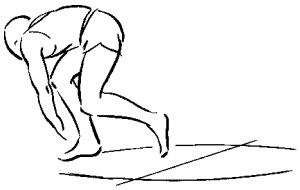
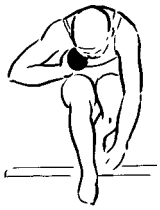
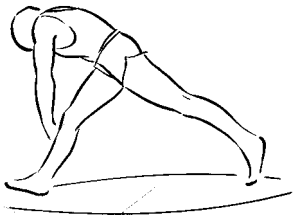
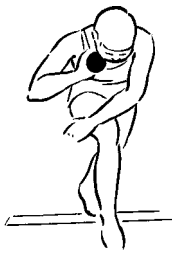
  "LOOK BEFORE YOU THROW"

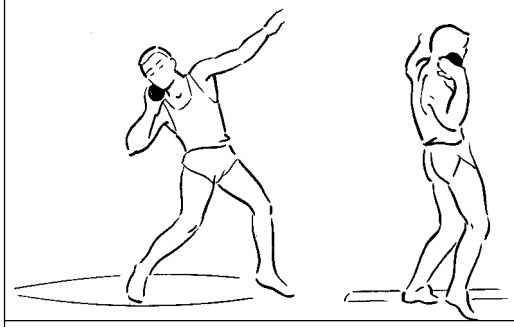
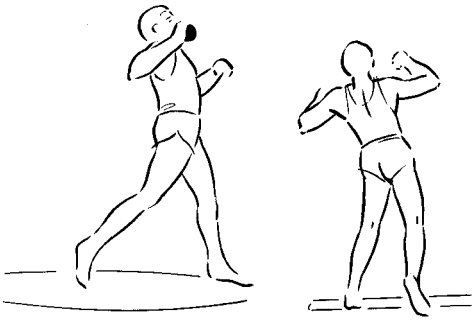
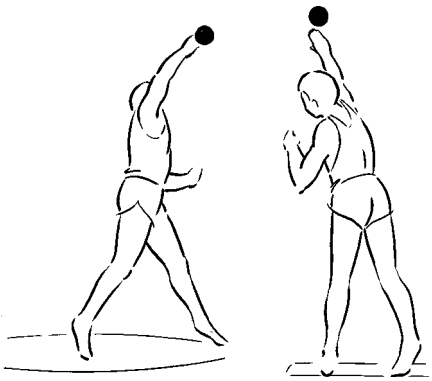
  "CHECK EQUIPMENT".

  These and others are all essential if the number of active throwers and teachers is not to be reduced!

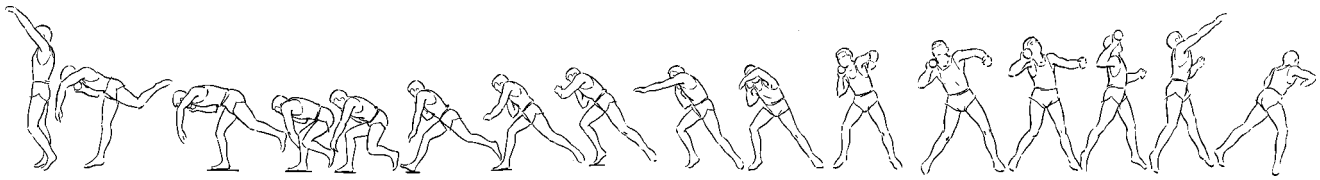
- It is important to instil self-discipline into the students and to understand the dangers that become apparent with carelessness.

Table 10.1

SHOT PUT	PHASE	OBSERVATION POINTS	
 	PRELIMINARY POSITION	FEET HIPS SHOULDER SHOT	Straight on. Square. Closed/square. Close into side of nek or under chin.
 	BALANCE POSITION (T-POSITION)	SHOULDERS RIGHT FOOT FREE LEG	Square/parallel to rear. Straight. Balancing body.
 	CROUCH	LEGS FREE ARM	Bent. Closed/square to rear leg.
 	SHIFT	RIGHT LEG LEFT LEG FREE ARM EYES	Flat drive backwards off heel. Kick towards stop board. Closed/square to rear. Focused on back of circle.
 	THROWING POSITION	HEAD AND SHOULDER CHIN/KNEE/ TOE WEIGHT FREE ARM/ SHOULDER	Facing back. All in line. Shot over right foot. Closed.

SHOT PUT (CONTINUED)	PHASE	OBSERVATION POINTS	
	LIFTING	HEAD LIFT RIGHT LEG HIPS LEFT LEG FREE ARM	Facing back. Drive. Drive to front. Bent, but then straightens. High.
	ARM STRIKE POSITION	RIGHT ELBOW HIPS RIGHT FOOT LEFT LEG CHEST HEAD	High. Pushed to front. Extended/braced. Push up. Look up.
	RELEASE	HEAD CHEST HIPS LEFT LEG ANGLE OF RELEASE OF SHOT	Look up. Push out. Forward. Straight/braced. 41°

Side view



ACTIVITIES – THROWS

The following may be used as practice for shot, discus and javelin.

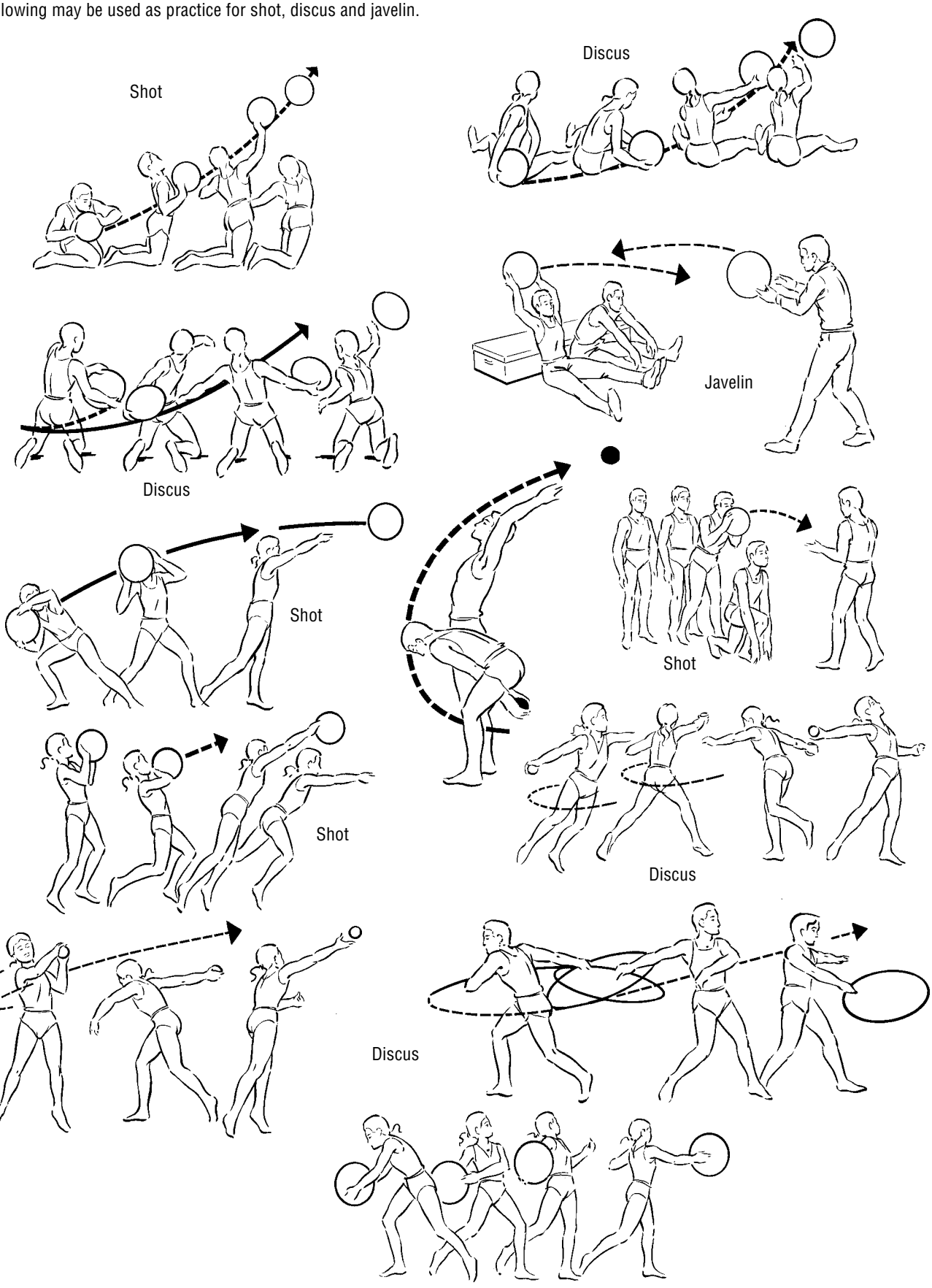


Figure 10.4

UNIT 11
Discus

Aim: The objective is to propel the implement the greatest possible distance within the rules of the event.

Full Technique: See table 11.1.

Basic Technique:

1. The weight is on the rear leg.
2. The body is balanced and in a chin – knee – toe position.
3. The legs initiate the rotational movement which provides most of the power.
4. The right leg drives the hips to the front.
5. This forces the chest to the front before the arm strikes.
6. The key feature is balance.

TEACHING POINTS

In the early stages use hoops and quoits to develop the skill in relative safety.

The Standing Throw

1. Start in a standing position facing the direction of the throw. The quoit/hoop is gripped in the palm and fingers with the hand on top. (See Figure 11.1)
2. The arm makes one long sweep back and forward and is released at shoulder height and just ahead of the body.

N.B. If the discus goes too far right, the release is too soon, too far left and it is too late.

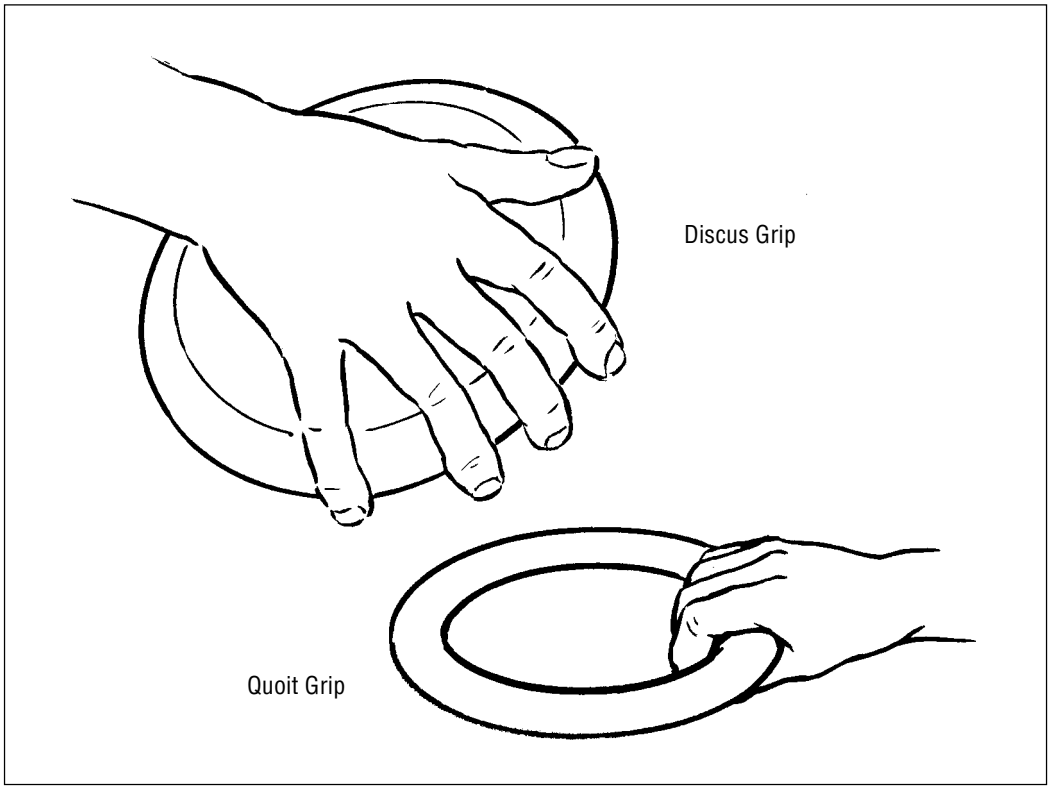
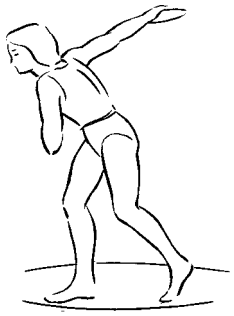
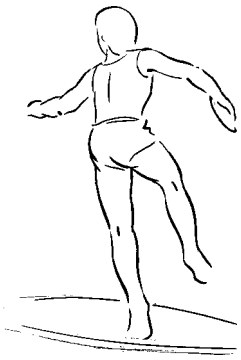
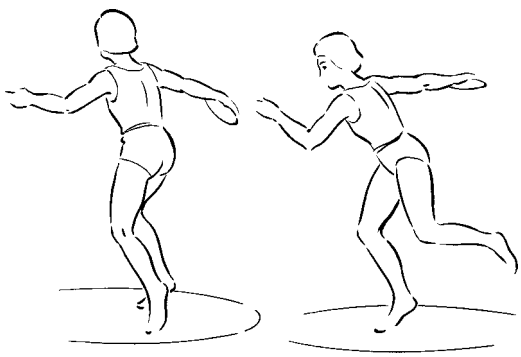
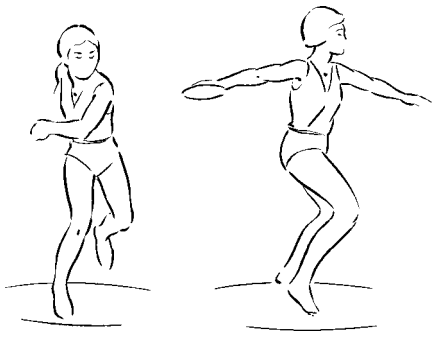
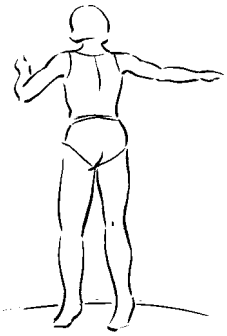


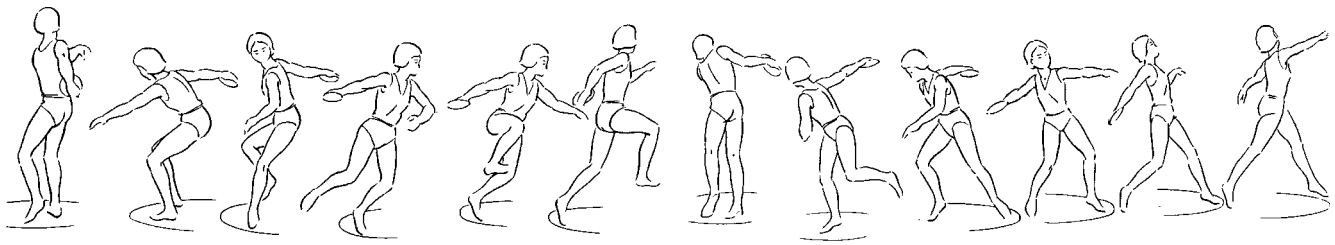
Figure 11.1

Table 11.1

DISCUS	PHASE	OBSERVATION POINTS	
	PRELIMINARY SWING	FOOT POSITION SHOULDERS WEIGHT FREE ARM	Slightly wider than shoulders. Level. Central. Closed across body.
	BALANCE POSITION	WEIGHT KNEES HEAD/EYES	Balanced. Bandy. Looking horizontally.
	SPIN	WEIGHT DISCUS BALANCE HEAD	Loaded left side. Held high. On left leg. With left shoulder.
	RUN	FREE ARM RIGHT LEG CENTRE OF WEIGHT	Closed. Drives across circle. Straight line across circle.
	ROTATION	EYES GROUND CONTACT HEEL OF POWER FOOT	Level. Right foot first. No contact.

DISCUS (CONTINUED)	PHASE	OBSERVATION POINTS	
	POWER POSITION	AXIS FOOT POSITION FREE ARM	Parallel. Heel toe. Held at shoulder level.
	LIFT	LEFT LEG RIGHT LEG RIGHT ARM	Brace. Lifting. Rising.
	RELEASE	FEET SHOULDERS ANGLE OF RELEASE	Contact. Horizontal. No wind – 35°.

Side view



Developing Technique:

The legs provide a great deal of the power by initiating a rotational movement, and by the right leg driving the hips to the front. For this to happen, the body must be balanced in a chin-knee-toe position with the weight over the rear leg.

The chest must be forced to the direction of the throw by the action of the hip and legs before the arm strikes.

Extra speed can be obtained from a rotational movement from the back of the circle but this is really for the person who has passed the novice stage. BALANCE is the key feature.

1. The discus is held with the right hand on top, the fingers evenly spread with the first joint curling over the rim (see Figure 12.1). The left hand is underneath for support. N.B. The discus is not GRIPPED.
2. The discus is held near the left shoulder.
3. Without preliminary swings, the discus is swung back with a long straight arm, with the discus and palm facing the ground.
4. Maintain the momentum of the swing and move the discus forward, it is released by spinning it off the index finger. (See Figure 11.2)

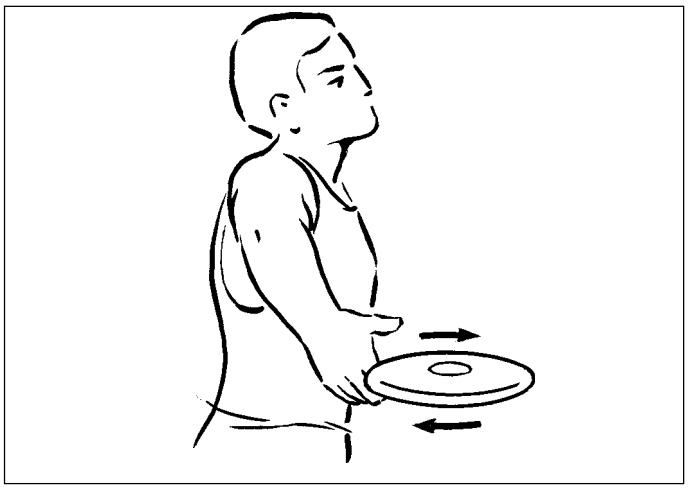


Figure 11.2

5. The movement must be done at speed or the discus will drop.
6. To develop the action as the discus is swung back, the student bends the right leg and foot and then pushes the hip through ahead of the arm to complete the throw. (See Figure 11.3)

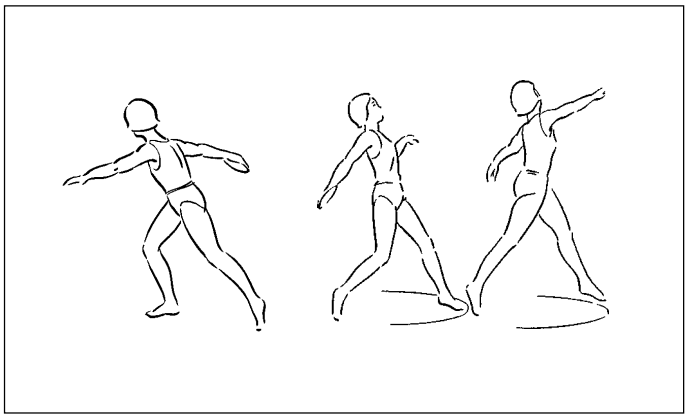


Figure 11.3

At this stage apply the technique in competitive situations, but with the emphasis still on technique.

The Running Turn (for a right-handed student)

1. Start at the rear of the circle (or lines 2.5m apart).
2. Face the direction of the throw with the left foot ahead of the right.
3. Establish a rhythm by swinging the discus backwards and forwards.
4. The running turn is started by the discus arm's swinging forwards.
5. This is followed by moving from the left to the right foot in the centre of the circle, and onto the left to land in the standing throw position. (See Figure 11.4)
6. The discus is released as in the standard throw.

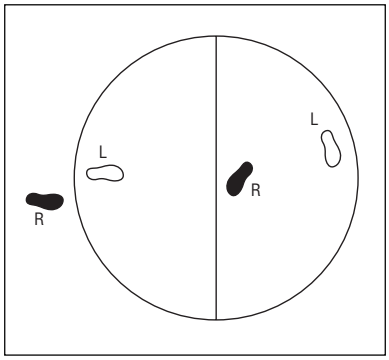


Figure 11.4

When the students are secure and confident, apply the technique in a competitive situation.

Activities:

1. Target throws: place a cone at a distance all can reach; the first to hit it is the winner.
2. Quoit/hoop throws: throw for distance and accuracy.
3. Throw and roll: measure the largest throw including any roll on landing.

SAFETY

This event poses most problems for class teaching, in that as the throw is rotational the discus is not always released to the front. This tangential nature of the implement's release makes the activity potentially very dangerous and it must be strictly supervised when using conventional equipment. (See Figs. 11.5 and 11.6)

This does not prevent the basic movement's being taught since hoops, quoits and slingballs can be substituted. Indeed, improvised equipment is additionally suitable because standardised implements are often too large for children to grip.

Throwing must be in one direction only and an "All throw – all retrieve" rule must apply.

If the landing area is damp, make sure that towels etc. are available for drying implements.

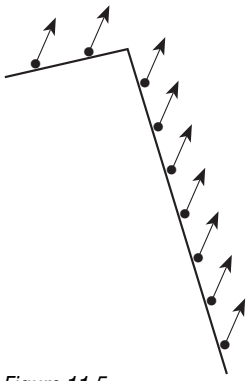


Figure 11.5

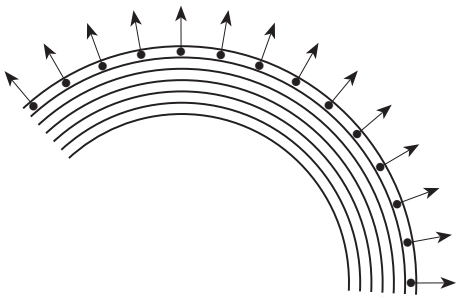


Figure.11.6

SIMPLE RULES

These are almost identical to the shot, but there is no stop board and the diameter of the circle is 2.50 metres.

UNIT 12
The Hammer

Aim: To achieve maximum distance within the rules of the event.

Full Technique: See table 13.1.

Basic Technique: (for a right handed student)

To achieve any distance it is important that a turning throw is used, and whilst this requires a degree of skill, it can be fun and most students enjoy learning to master it.

1. The initial momentum is gained by swinging the hammer round the head.
2. The arms are straight at the front of the body.
3. The knees are flexed.
4. As the hammer rises, the legs extend.
5. At the low point, the hammer is off the right foot. (See Figure 12.1)
6. At the high point it is over the left shoulder. (See Figure 12.1)

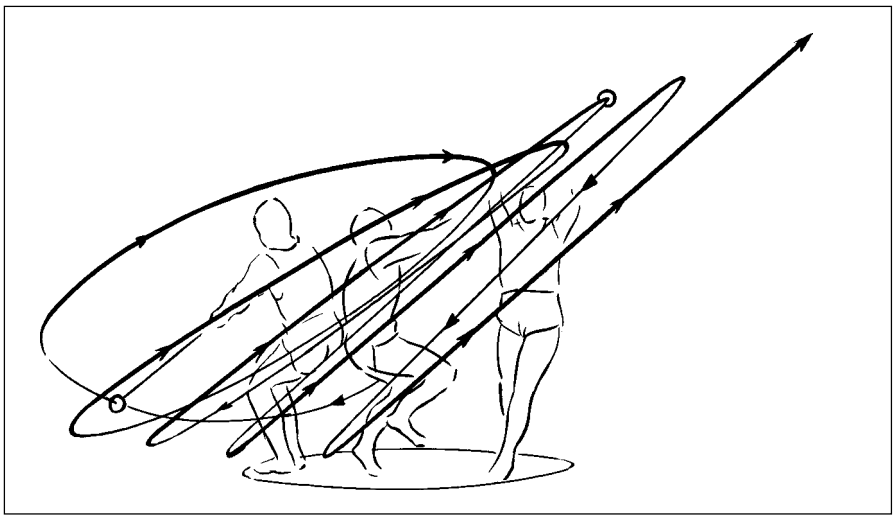
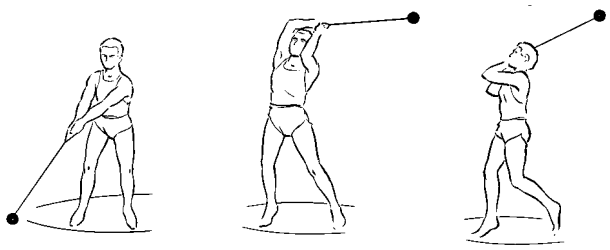
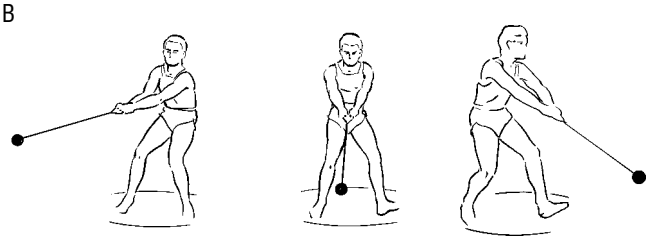
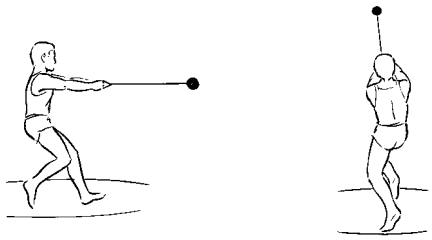
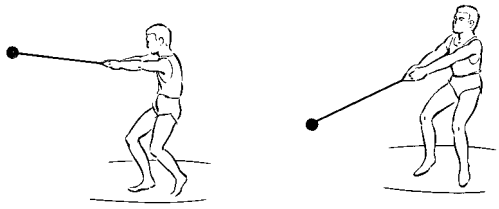
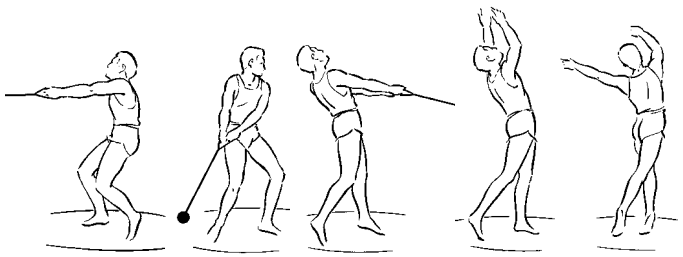


Figure 12.1

7. There are 2-3 swings taken to set up an initial rhythm.
8. With the arms straight, there is a series of heel-toe runs used to move across the circle.
9. At the end of these turns the arms and back lift to release the hammer over the left shoulder.

Table 12.1

HAMMER	PHASE	OBSERVATION POINTS	
A 	INITIAL SWINGS	2 SWINGS	At low point, hammer is pointing to right foot.
		LEGS/HIPS	Use legs/hips and trunk to counter-balance weight.
		ARMS	Hands to forehead, not over head.
B 	ENTRY	HEAD	Looking at hammer head.
		TRUNK	Upright.
		LEGS	Weight moves over to left leg; heel turn long.
		ARMS	Shoulders, arms and hands form triangle.
		HANDS	
C 	SINGLE SUPPORT PHASE	FEET	Turning rotation on left heel and right toe.
		TRUNK	Upright.
		HEAD	Eyes looking at hammer.
		LEGS	Weight on left leg.
D 	DOUBLE SUPPORT PHASE	FEET	Right knee is picked up and moved down as soon as possible.
		LEGS	Left leg pushes away.
		HEAD	Eyes on hammer.
		ARMS	Long.
		HANDS	Keep hands low.
	The sequence B, C and D is repeated twice more; as this progresses, the Hammer is accelerated and the angle (of the hammer-wire-arms) steepens. The right foot on turns 2 and 3 comes off earlier as more speed is generated.		
E 	DELIVERY	LEGS (1)	Left leg quickly pushes in direction of throw.
		LEGS (2)	Active lift with legs.
		FEET	Pivot together to allow release before striking.
		ARMS (1)	Hammer goes through low point.
		ARMS (2)	Release hammer high.
		HEAD	Follows hammer.
			

Key points:

- long rhythmic swings
- low point off left foot
- arms straight
- back straight, head up
- balanced turns
- stretch release

THE HOLD

1. The hammer handle is held in the left hand so that the grip lies along the 2nd and 3rd joint of the fingers.
2. The right hand does likewise.
3. The left fingertips fit into the base of the fingers of the right hand. (See Figure.12.2)
4. In the initial stage, work with a shortened handle.

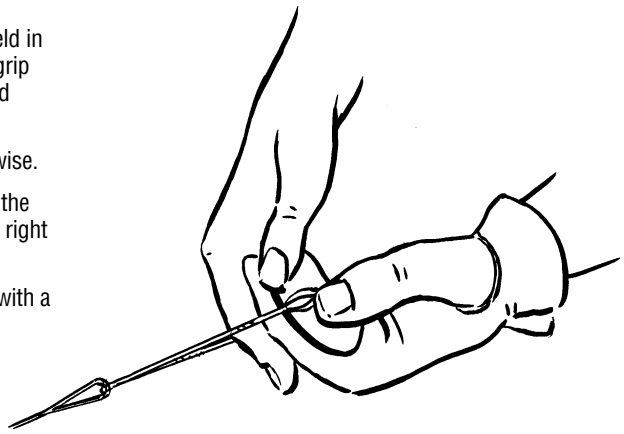


Figure 12.2

TEACHING POINTS

As with the discus use modified equipment, e.g. medicine balls, slingballs, podium medicine balls used with rope. (See Figure 12.3)

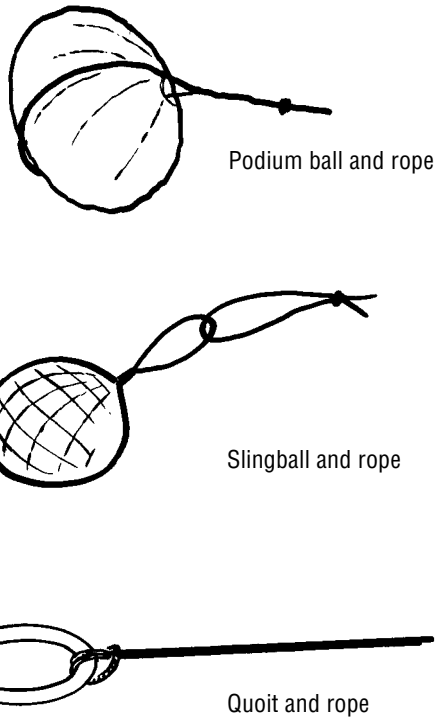


Figure 12.3

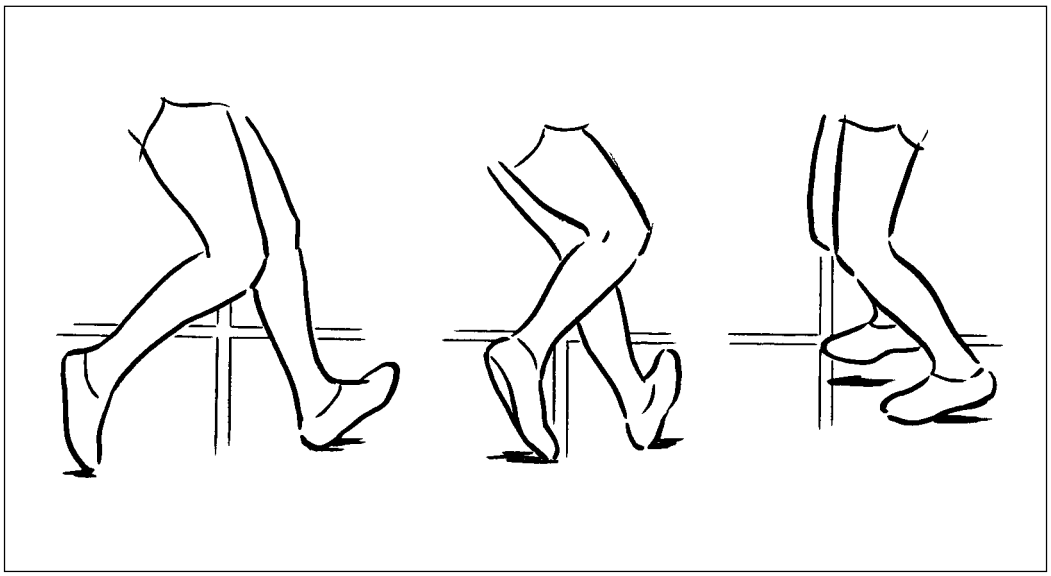
THE STANDING THROW

1. The start is with the back to the direction of the throw.
2. Feet shoulder width apart.
3. Knees slightly flexed.
4. The hammer is slung over the left shoulder from a starting position low right.
5. The finish is with arms long and high over the left shoulder.
6. Develop this to include 2-3 preliminary swings with a release high over the left shoulder.

TURNS

1. These are successive heel/toe actions from left-right-left foot.
2. There should be alignment between hammer, hips and shoulders.
3. As the hammer start to "run away" the right foot is quickly lifted over the left leg and is grounded before the hammer "arrives". (See Figure.12.4)
4. Students should work 3-4 turns without releasing the hammer (dry turns).
5. Link together preliminary swings with a turn.
6. Develop this to swings plus two turns before the delivery/release.

Figure 12.4



At this stage work with and without the hammer will be beneficial. Students should experiment with the skill of turning (3-6 turns in succession).

THE FULL THROW

As skill improves, lengthen the wire to the full 1.22m (4') and encourage students to throw 2-3 turns.

Activities:

Students should work on swing and turn combinations starting from the rear of the circle, for example two swings, then two controlled turns, followed by two swings, followed by two turns.

Practising this skill can be fun; students normally find it a rewarding activity, and hence are prepared to work at it.

SIMPLE RULES:

- The throw is made from a 2.135m (7') diameter circle into a 40° sector.
- There is no restriction on the style of throw except it must be started from a stationary position, and the thrower must leave by the rear of the circle, and be under control.
- For a valid 'throw' an exit from the circle may not be made until after the hammer has landed.

SAFETY

- This is a potentially dangerous event and great care must be taken in teaching and when practising.
- With right-handed throwers the most vulnerable area is to their right.
- Whilst it is obviously safer if a throwing cage is used, this is an event which, with or without a cage, requires the **STRICTEST SUPERVISION.**
- Always ensure that non-throwers are positioned to the rear of the thrower, and are paying attention to the whole action.

UNIT 13
Javelin

Aim: To achieve the maximum distance possible within the rules of the event.

Full Technique: See Table 13.1.

Basic Technique:

1. A good throw is based on speed of approach, speed of release and a stabilized flight.
2. The throw is made off a long base with the feet in line with the direction of the throw and the throwing arm extended backwards and parallel to the ground.
3. The rear leg drives the hips to the front.
4. The arm strikes very fast with the elbow close to the javelin to produce a forearm whiplash effect.
5. The javelin lies flat on the palm supported by the fingers.
6. The fingers are BEHIND the ledge formed by the binding.

TEACHING POINTS

The Grip

There are 3 basic grips (see Figure 13.1), however, the V grip is the most suitable for beginners.

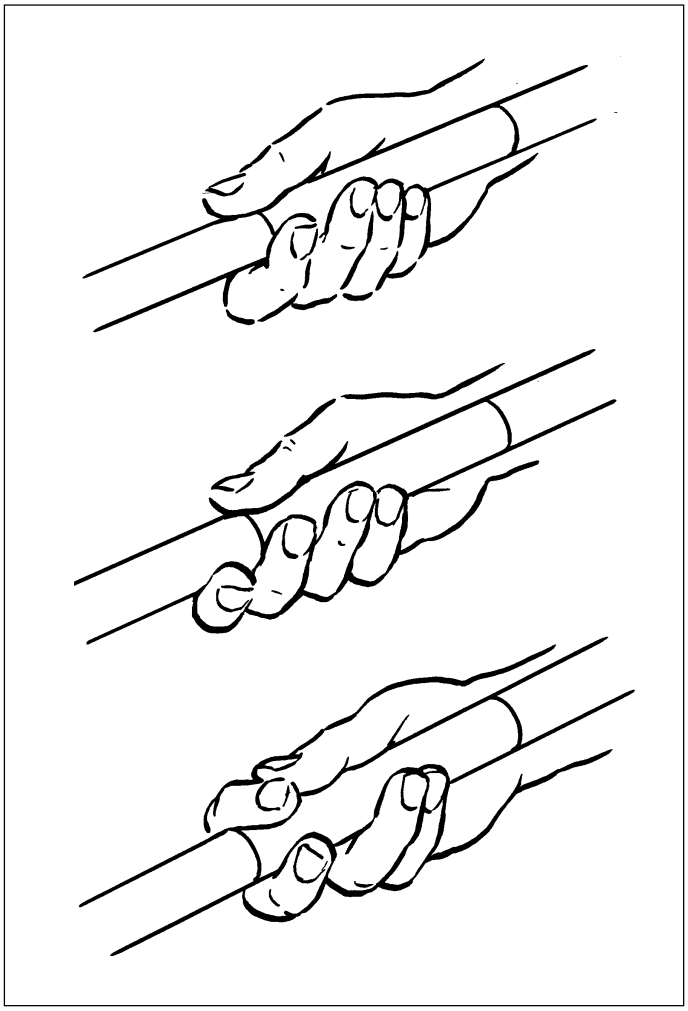
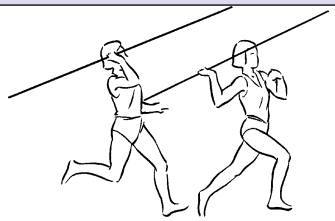
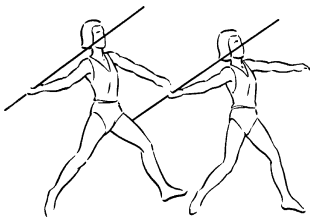
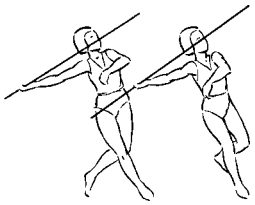
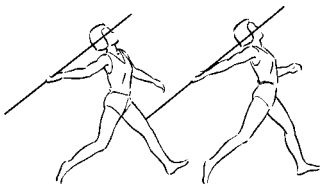
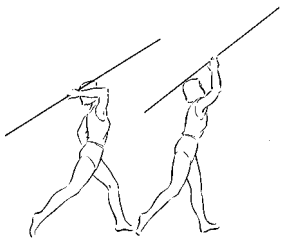
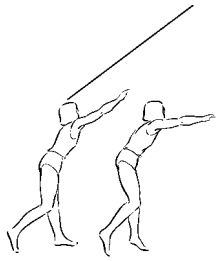
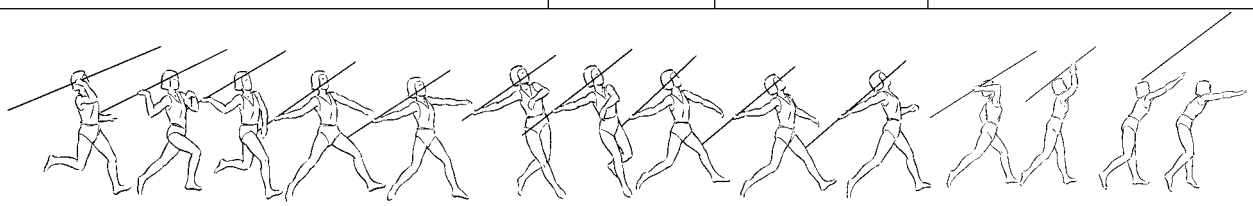


Figure 13.1

Table 13.1

JAVELIN	PHASE	OBSERVATION POINTS	
	APPROACH RUN CARRY NUMBER OF STRIDES	SPEED RHYTHM CARRY (VARIOUS)	Controlled. Elbow forward, palm up. Above shoulder. Depends on experience.
	WITHDRAWAL	ON CHECK MARK RIGHT FOOT SMOOTH IN LINE HEAD LEADING	Marker on right hand side of run way (right handed thrower). Feet in line. Twist shoulder/hips relationship. Above, parallel with shoulder. Head steady to the front.
	CROSS OVER	LEFT-RIGHT-LEFT RHYTHM ARM RIGHT LEG ACTION LEFT LEG ACTION	Fast, quick (feet low to ground). Bounding. Long hand, palm up. Right knee kick – soccer style. Low and long – heel lead – remain in line.
	BOW POSITION POWER POSITION	THROWING ARM HEAD CHEST FINAL STRIDE	Long straight/back. Slightly up. Push out. Long.
	HIP/ARM STRIKE	THROWING ARM RIGHT HIP LEFT SIDE THROW THROUGH THE POINT	Elbow leads the way. Drives through. Bracing/straightening of left leg at moment of release. Throw through hole in the sky.
	RELEASE FOLLOW THROUGH	THROWING ARM BODY POSITION RIGHT LEG LEGS	Delayed until hip comes through. Stays high. Drives hip forward. Long recovery stride.
			

Development:

1. The standing throw is responsible for 70% of the final distance. (See Figure 13.2)

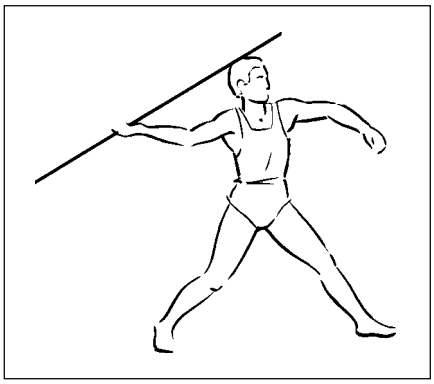


Figure 13.2

2. A three-stride approach. (See Figure.13.3)

In this throw, both feet must move forward and the rhythm is:

LEFT, BIG STRIDE, THROW

3. A five-stride approach which still starts with the javelin withdrawn.
4. A nine-stride approach (4 running strides – 2 strides to withdraw the javelin – 3 strides to throw).
5. A nine-stride approach will be appropriate for the better school-level thrower.

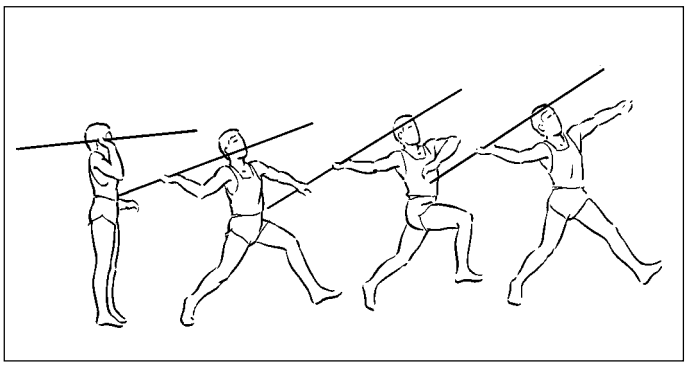


Figure 13.3

Activities:

1. Throw tennis and cricket balls.
2. Use netballs and soccer balls.
3. Use 1 or 2 hands. (See Figs.13.4 and 13.5)

N.B. It is possible to get junior (400 grm) javelins which are easier to handle than the standard 600 grm.

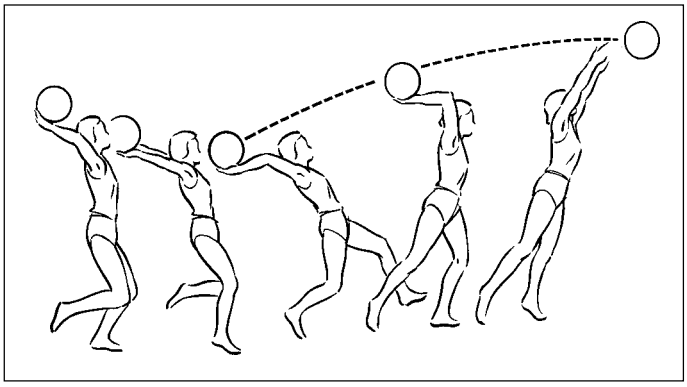


Figure.13.4

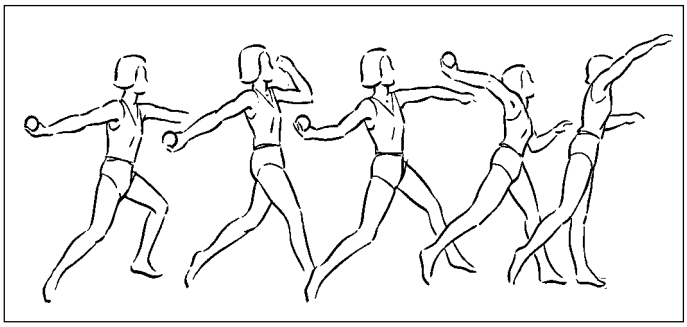


Figure.13.5

SIMPLE RULES:

- The throw is made from between two parallel lines 4m apart and behind an arc (radius 8m) joining the lines.
- For a throw to be valid, the javelin must land point first.
- It must land in the throwing sector and the athlete must not cross the throwing/restraining line.

N.B. The javelin does **not** have to stick in.

SAFETY

- Javelin is one of the most dangerous of all events.
- Both head and tail are dangerous and hence it **must** be carried vertically.
- The “all throw, all retrieve” rule **must** be in force.
- Establish a safe routine.

Never run to collect a javelin.

Never leave a javelin stuck in the ground at an angle.

The javelin must always be raised to the vertical after a throw.

There must be complete supervision at all times.

UNIT 14
Physical Conditioning

Athletes spend a considerable amount of the time they devote to their sport in training. To be successful in athletics today, many hours of training are required to develop high levels of skill and fitness. In this section an overview will be given of the different types of training that athletes might employ when preparing for success in their chosen discipline.

Training for athletics might be described using the five 'S's:

Skill
Speed
Stamina
Strength
Suppleness

The first of the five 'S's is SKILL, training to develop new technique or to practise previously established skills. The remaining four 'S's: Speed, Strength, Stamina and Suppleness, are aspects of fitness training which are referred to in athletics as conditioning.

SKILL

The skills of running, jumping and throwing can be developed from a young age. Skill training should feature in all athletes' programmes on a weekly basis throughout the training year. In the preparation phases of the year, techniques can be altered and new skills learned to be put to use during the competition phases.

SPEED

To develop speed, the skill must be practised on a regular basis at maximum or close to maximum rate. In running, speed would relate to the athlete's ability to run quickly. Therefore, to develop running speed, runs over short distances performed at close to maximum effort would be used. Speed training, as with skill training, should take place before the athlete becomes fatigued. The athlete, therefore, performs speed training at the start of a training session and allows adequate recovery between these near maximal efforts.

Examples of speed training:

6 x 30-40 metres (from standing start) acceleration runs for pure speed. Full recovery between each repetition.

STAMINA

Stamina is another term for endurance. Endurance training can either be AEROBIC (with oxygen) or ANAEROBIC (without oxygen). Aerobic training leads to a strong cardiovascular system and is developed through continuous or interval running. The longer the duration of an athlete's event, the more important is aerobic endurance.

CONTINUOUS RUNS involve going out for a run over a set distance or for a set time. An example would be a steady paced run of 20-30 mins duration, run at a pace that would allow the athlete's heart rate to rise to about 150-160 beats per minute.

INTERVAL TRAINING is a specific form of training, where the training effect takes place during the interval. The athlete runs a set distance, e.g. 200 metres, and aims to get the heart rate up to about 180 beats per minute (b.p.m). The interval or recovery period should be long enough to allow the heart rate to drop to 120-140 b.p.m. before commencing the next run.

Recovery times are usually short, i.e. 1-3 minutes, and an example would be 10 x 200 metres with 2 minutes' rest in between. It is critical, therefore, in order to achieve the required effect, that:

i) the speed or intensity of the run is not too fast.

ii) the distance run or duration is not too long.

IT IS THE RECOVERING ACTIVITY OF THE HEART WHICH IS THE STIMULUS FOR THE AEROBIC TRAINING EFFECT.

Repetition training is a form of interval training which leads to the ability to tolerate the build up of lactic acid in the muscle when the body works at maximum or sub-maximum effort. There are two important types of anaerobic endurance: SPEED ENDURANCE and STRENGTH ENDURANCE. Developing speed endurance helps you to run at speed despite the build up of lactic acid, and developing strength endurance allows you to continue to express force despite the lactic acid build up.

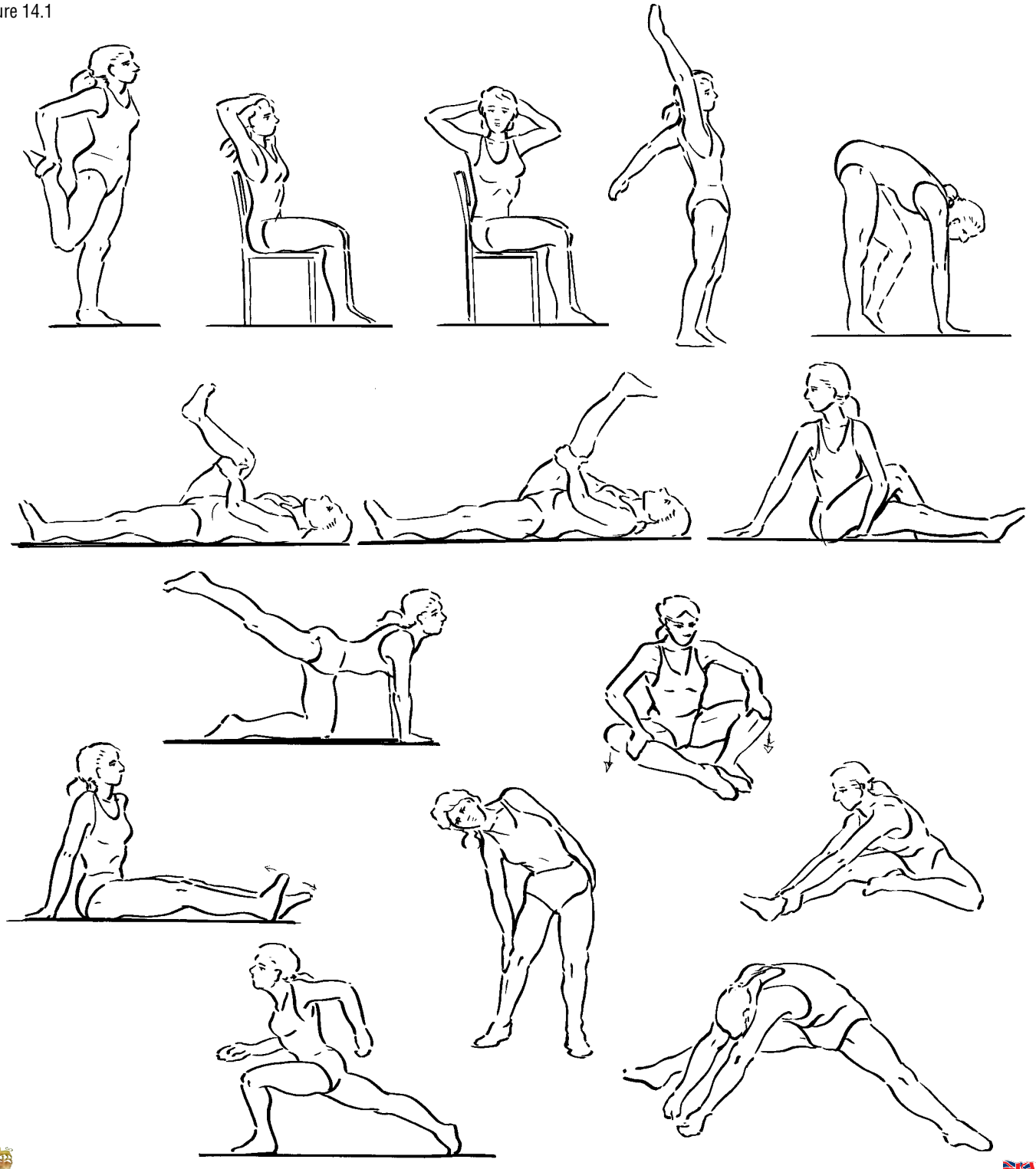
Speed endurance is developed by performing fast runs over relatively short distances with recoveries which are long enough to allow the quality of work to be maintained. An example of this type of training would be: 2 x 4 x 150m with a walk back recovery and 10-15 mins between sets. Another example would be 4 x 300m with 5 mins between sets. Strength endurance is developed by asking the runner to continue expressing strength despite the build-up of lactic acid in the muscles. An example of this would be hill runs with short recoveries. Prior to puberty young people have difficulty in working anaerobically, and therefore there is little point in using anaerobic training with athletes of this age. Anaerobic training should be gradually introduced into training from about 14-15 years of age. At earlier ages, the emphasis should be on aerobic training.

SUPPLENESS

Suppleness is another term for mobility and is also referred to as flexibility or stretching. The term mobility refers to the range of motion through which an athlete can move his/her joints. Mobility training stretches the muscles and their connective tissues in an attempt to improve the athlete's range of motion and reduce risk of injury.

Figures in sheet 14.1 show examples of mobility exercises:

Figure 14.1



The positions shown in the exercises in Figure 14.1 should be achieved through slow stretching movements which are held for 10-12 seconds before being released. Slow stretching exercises, known as active mobility, are the safest types of mobility training. Further information and descriptions of exercises can be obtained from *Mobility Training* published by the BAF.

STRENGTH

Strength training involves a number of different activities and develops a range of physical abilities. Strength refers to the ability to apply force. Exerting a maximal force, for example in trying to lift a heavy weight, is a type of strength which we call MAXIMUM STRENGTH. Expressing a force quickly, for example at the take-off in performing a long jump, we call ELASTIC STRENGTH. A third type of strength involves expressing force despite the build-up of lactic acid, and this we referred to under stamina as STRENGTH ENDURANCE. Maximal strength is best developed with exercises which involve a few repetitions and a large resistance or loading. Elastic strength is developed through fast repetitions using a medium loading, and strength endurance by using many repetitions of a light load. The following are examples of training activities which will develop strength. Young athletes of less than 15-16 years of age should avoid weight training and depth jumping activities. Instead they should use bodyweight exercises, circuit or stage training, medicine ball exercises, resistance running and light plyometric exercises. (See Figs. 14.2 and 14.3)

Figure 14.2 Bodyweight exercises organised as a circuit.

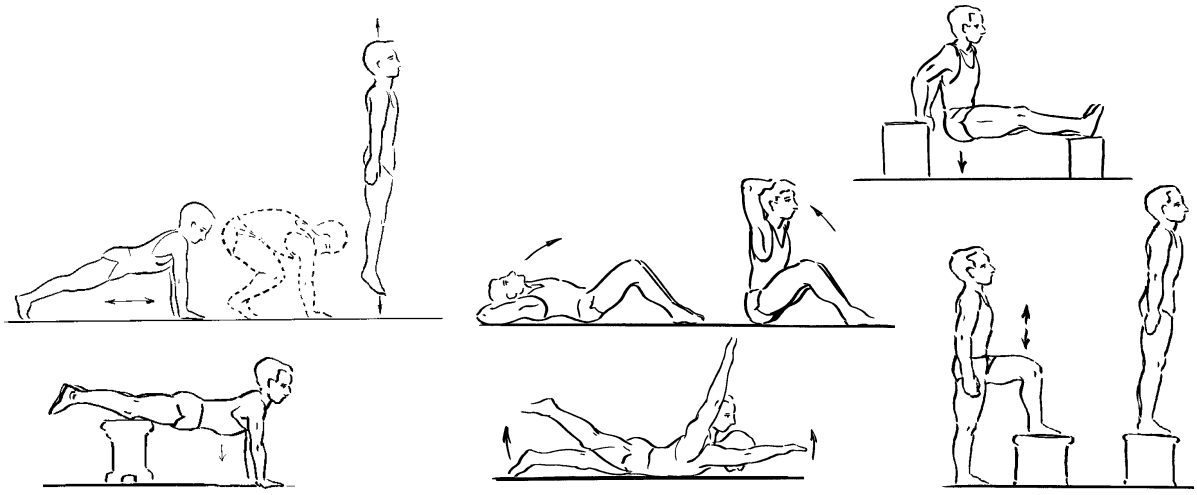
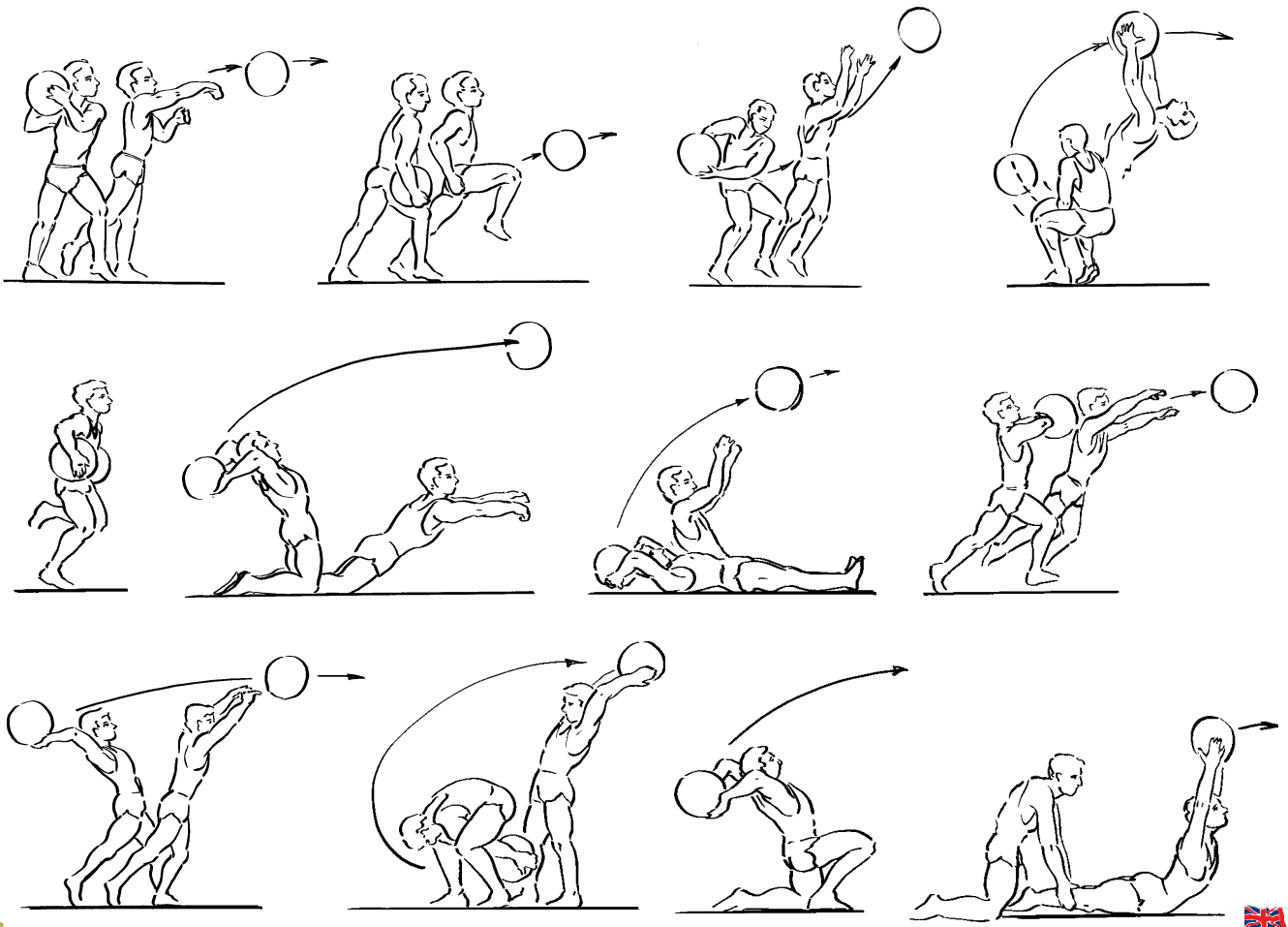


Figure 14.3 Examples of medicine ball exercises



CONDITIONING FOR ATHLETICS

All who compete in athletics need to be athletes first and then sprinters, runners, hurdlers, jumpers or throwers next. Being an all-round athlete requires all-round conditioning, a mixture of general strength, mobility, speed and endurance. Having developed a good level of general fitness, the athlete can then develop the conditioning he/she needs to meet the demands of his/her specialist event. Both general and specific conditioning methods fall broadly into the methods described earlier in this section and which can be represented by Figure 14.4 below.

Figure 14.4

TRAINING PRINCIPLES

In order for athletes to improve, training is necessary. By using carefully worked out training programmes, using the correct training methods, performance can be improved more effectively.

When preparing annual training programmes and planning the content of each month/week, a number of training principles need to be considered.

Overload
- If training is to progress, loadings or the workload must be sufficiently demanding in order to encourage the body to adapt and improve performance. The increase will then depend on the effects required.

Reversibility
- Training effects reverse when training stops.
- Training gains will be gradually lost at about the same rate as they were attained.

Specificity
- Training must be specific to the athlete and the event and to the qualities to be developed.

Recovery
- Recovery is an important part of the training process.
- Adaptation to the training load takes place during the recovery period.

Progression
- Workloads should be increased gradually both over each year and over a period of years.

Loadings can be increased progressively by increasing:

- Intensity of training, e.g. long runs
- Frequency of training, e.g. number of training sessions per week
- Density of training, e.g. reducing recovery times
- Magnitude of training, e.g. increasing number of repetitions.

But not all at once!

UNIT 15
The Structure of the Sport

THE WORLD GOVERNING BODY

Introduction
On 17 July 1912, following the Olympic Games of Stockholm, a Congress was held to form the International Federation for Amateur Athletics. Seventeen countries were represented at this meeting. With the increasing development of international contests and the Olympic Games, a need had arisen for a universal code of rules and regulations, and for a common definition of amateur status acceptable throughout the world, as well as an authentic register of World and Olympic records.

The International Amateur Athletics Federation (IAAF) is the largest International Sports Federation. It is the world governing body for athletics, embracing the disciplines of track and field athletics (indoor and outdoor), cross country running, road running and race walking in men's, women's and junior competitions.

The Role of the IAAF

- It establishes the rules of the sport.
- It approves and maintains records.
- It conducts a World Athletics Series of major athletics competitions.
- It is the supervising body for the technical running of athletics at the Olympic Games.
- It conducts a number of circuits of world class events including IAAF/ Mobil Grand Prix serves and the IAAF World Cross Challenge for Cross Country. (See Table 15.1 below)

IAAF World Athletic Series includes:	Frequency
World Race Walking Cup	Every 2 years
World Cross Country Championships	Annually
World Cup of Athletics	Every 2 years
World Championships	Every 2 years
IAAF/Mobile Grand Prix Series	Annually
World Junior Championships	Every 2 years
World Indoor Championships	Every 2 years
World Half Marathon Championships	Annually
World Road Relay Championships	Every 2 years
World Marathon	Every 2 years

Table 15.1

The IAAF AIM

To increase the development, promotion and support of athletics at all levels and in all parts of the world.

The IAAF Structure

The IAAF is run through a series of committees:

- Technical Committee
- Women's Committee
- Cross Country and Road Running Committee
- Walking Committee
- Medical Committee
- Veterans' Committee

The IAAF also has the task of development, where the primary goal is to see that all IAAF Member Federations are able to create conditions under which their athletes fulfil their potential in competition, and derive maximum benefit from the sport. The budget for the IAAF's development plans for 1993-1997 is $20 million worldwide. Among the activities currently supported by the IAAF are:

- Research into the specific needs of each federation
- The establishment of a world-wide education and certification system for coaches and officials
- Seminars for administrators, scientists and medical personnel
- The production of publications and audio-visual materials.

STRUCTURE OF THE SPORT IN THE U.K.

In October 1991 The British Athletic Federation replaced the British Amateur Athletic Board (BAAB) as the body responsible for track and field athletics in the UK.

Following the well-chronicled financial demise of the BAF in 1997, a new body – UK Athletics – was formed. UK Athletics is the governing body for the sport of Athletics in the country.

The headquarters are based in Birmingham. Funding for the new structure comes predominantly from five sources:

- The UK Sports Council
- World Class Performance funding
- Reebok
- A television contract with the BBC
- Sponsorship sources

THE ADMINISTRATIVE STRUCTURE OF UK ATHLETICS

President of UK Athletics
David Hemery

Non Executive Council
Sir Eddie Kulukundis (Vice President)
Sir Christopher Chataway
Karena Vleck

Chief Executive
David Moorcroft

EXECUTIVE BOARD

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PERFORMANCE	**DEVELOPMENT**	**COMPETITION**	**ANTI DOPING & RULES**	**ADMINISTRATION & COMMUNICATION**
Technical Directors Tudor Bidder Norman Brook Graham Knight John Trower **Team Directors** Brian Hall – U20 Dave Lease – U23 **Performance Programme Manager** David Dix **Competition Manager** Cherry Alexander **Administration and Clerical Support**	**Education & Training Manager** To be appointed **Facilities Manager** Dave Young **Development Co-ordinator** Joanne Trante **Honorary Post Holders of Development PST and Facilities Support Team** To be appointed	**Head of Cross Country PST** Graham Healey **Head of Road Running PST** Geoff Wightman **Head of Race Walking** Peter Marlow **Head of Hill & Fell** Robin Morris **Honorary Members of Policy and Support Teams** To be appointed	**Head of Rules & Records PST** Jim McInnes **Secretary of Rules & Records PST** David Littlewood **Anti Doping Co-ordinator** Joslyn Hoyte-Smith **Honorary Members of PSTs for Rules and Records and Anti Doping**	**Executive Services Manager** Helen Wyeth **Administration Manager** Robin Phillips **Finance Manager** Debbie Koster **Assistant Media Officer** Ed Tutty **Systems & Project Co-ordinator** Richard Moore **Company Services Team providing Financial and Clerical Support**

Figure 15.2

Honorary Appointments

Salaried Appointments

HOW TO BECOME A COACH

Conditions for the training and qualification of coaches

Club Coach – Level 1	**Club Coach** – Level 2	**Senior Coach**
Attendance at an Event Theory Course covering ALL events. Attendance at a course in General Coaching Theory. Attendance at a course covers speed, jumps, throws, endurance.	Award already held at Club Coach Level 1. Attendance at an Event Theory Course in a chosen event. Attendance at a course in General Coaching Theory. Success in all assessments.	Award already held at Club Coach Level 2. Attendance at an Event Theory Course in a chosen event. Attendance at a course in General Coaching Theory. Success in all assessments.
METHOD OF QUALIFICATION		
Confirmation of the completion of the Event Theory elements. Confirmation of the completion of the Coaching Theory elements. Confirmation of at least 15 practical coaching sessions.	Confirmation of the completion of the Event Theory elements. Confirmation of the completion of the Coaching theory elements. Confirmation of at least 45 practical coaching sessions since gaining the previous award (i.e. about 1 year's work). Success in one practical assessment. Successfully passing an objective test paper containing Event and Coaching Theory related questions.	Confirmation of the completion of the Event Theory elements. Confirmation of the completion of the Coaching Theory elements. Confirmation of at least 60 practical coaching sessions since gaining the previous award (i.e. about 2 years' work). Success in more than one practical assessment. Successful passing separate objective test papers in Event Theory and Coaching Theory. Successful presentation for assessment of a training record for one year, this to include own evaluation of work.

N.B. A new coach education programme was developed in 2000, which incorporates 5 levels of award. For further details please contact UK Athletics, 10 Harborne Road, Edgbaston, Birmingham B15 3AA Tel: 0121 456 5098

UNIT 16
History of Track and Field Athletics

Running, jumping and throwing are such natural activities that it is likely that people have always enjoyed them as a source of competition involving tests of speed, strength and stamina. Most of the events commonly seen in today's athletics arena have their roots in contests of many centuries ago, with some dating back to the ancient Olympic Games which started in Greece in 776 B.C. A few are relatively recent, for example hurdles, which had its origins in the rural festivals and games of the last century. Modern events have evolved since the early days due to the development of facilities and equipment, for example high jump, where soft, raised landing areas has allowed developments in technique which otherwise would have been impossible.

THE HISTORY OF SPECIFIC EVENTS

THROWS

There are 4 implements used in the throws:

- Discus
- Javelin
- Hammer
- Shot

Discus

Some believe that the discus was originally a flat stone which was used to hunt herd animals. The hunter hurled it at the animals legs and, having incapacitated it, could move in for the kill. Others believe it was used as a defence weapon and rolled down slopes onto an advancing enemy during hostilities.

Javelin

The spear-like javelin was used to kill animals, and most cultures had this as a weapon of war.

Hammer

This was not a hunting implement, but some evidence comes from the Gaelic games of Ireland of the hurling of a chariot wheel or a spoke with a hub. An alternative theory is that it has evolved from the slingshot, where the concepts of force (centrifugal) and range (increasing the speed of release) are closer to the modern event.

Modern hammer throwing can be traced to the Braemar Games of 1840.

1860	Donald Dinnie introduced the turning throw.
1860	The Oxford v Cambridge match – the cricket ball throw was replaced by the hammer.
1896	The hammer became an Olympic event.

Shot

This also evolved from tossing the stone in the Gaelic games, the modern implement being based on the cannon balls used by soldiers to challenge each other by putting from the shoulder.

JUMPS

There are 4 jumping events:

- Long Jump
- Triple Jump
- High Jump
- Pole Vault

Long Jump

The event is based on the original Greek Olympics where the athletes did not run, but performed a standing jump carrying weights or halteres, which were used to enhance the distance covered. The modern event specifically bans the use of such aids. 19th century jumpers used weights, and jumped from elevated ramps.

1854	J. Howard Chester jumped 29'7" (probably using both).
1991	The 23 year old world record of 8m 90cm, held by Bob Beamon, was broken in Tokyo by Mike Powell who currently holds the title at 8m 95cm.

The Triple Jump

This also stems from the Greek Olympics where a multiple jump of 16.76m was recorded by Phaylus, a Greek athlete, although the exact form of this jump is not known. In the 18th century the first triple jumps were recorded. In the 19th and 20th centuries, the event was based on a hop, hop jump technique. The modern event, however, clearly stipulates hop-step-jump.

The High Jump

The high jump was from grass to grass.This was followed by a sand landing area, which has now been replaced by the foam bed. Technology has allowed athletes to develop techniques which would previously have been unsafe to use because of the surface of the landing area. The earliest technique was the scissors which evolved into the back layout scissors, which was more efficient in terms of clearance position.

1940s	The Eastern Cut-off became popular.
1940s-50s	The Western Roll was the most popular technique.
1956	The Straddle took over.
1968	The Fosbury Flop was introduced; and this is still the most popular technique.

The Pole Vault

Some form of vaulting is recorded from the 5th century. In these early days it would have been distance and not height which was important.

1793	the first reference to the modern event is found in a book by Gutsmuth, *Gymnastics fur die Jugend.*
1834	Modern competitive vaulting started at a sports meeting held at Flan, near Ulverston.
1881	Tom Ray of the Ulverston cricket club set a world best of 3.432m using a climbing technique.
1889	The climbing technique banned in the USA.
1919	The climbing technique banned in Britain; the type of pole was also changed .
1900-1948	Bamboo poles were used.
1940	Cornelius 'Dutch' Warmerdam became the first vaulter to clear 15 feet.
1948-1960	Metal poles were used.
1957	Bob Gutowski broke Warmerdam's record.
1960	Don Bragg won the Olympics using a metal pole. This was the last time a metal pole was used in high level competition.
1960-present	The fibreglass pole took over and this is the pole used today by the current World Record holder Sergei Bubka of the Ukraine.

SPRINTS AND HURDLES

Sprints

Sprinting is one of the oldest recorded forms of athletic competition. The Ancient Olympics was almost all sprint races such as:

- the STADE, i.e. the length of the stadium (200 paces)
- the DIALOS: the length of the stadium and back (400 paces; this dictated the dimensions of the present track 400 paces → 400 metres)
- the DOLICHES, approximately 5,000 metres

Hurdles

These were originally sheep hurdles or fences which were fixed into the ground. The athletes therefore jumped rather than hurdled the barriers.

The sport has continued to develop until it has become the complex, worldwide sport it is today.

UNIT 17
Current Issues

SPONSORSHIP

Over the last twenty years or so, sponsorship has become more and more important, both to the financial success of big events, and to the elite athlete in terms of support.

Athletics is an amateur sport and consequently serious involvement does not result in the kind of regular wage return a professional footballer might expect. The athlete must, therefore, work either on a full or part-time basis, fitting training around any free hours in the daily schedule. The other available option is to become a "full-time" athlete. In the UK this decision is only really possible for the top athletes in their event. Companies may see a reasonable advertising return from supporting the athlete in his/her endeavours because of the athlete's success and the amount of time he/she can therefore command from the media.

Support or sponsorship is often available from sportswear or sports-shoe companies, although help is certainly not as easy to obtain as it was in the late 1970s or early 80s. Even the larger more well known concerns have cut down the numbers of athletes they are prepared to promote, to a minimum of top performers.

Sponsorship may be given in various forms:

- buying equipment at trade prices
- receiving an amount of free equipment
- the provision of all equipment within reason, together with a financial retainer at the outset of each yearly contract
- certain graduating bonuses, agreed prior to a major championship, for example for achieving a final place; additional bonuses, depending on the colour of the medal gained.

In major competitions athletes are required to wear only their own country's official trackwear, with the only acceptable variable being the footwear contract.

However, in the various televised Grand Prix meetings athletes are allowed to wear their own sponsors' equipment plus lettering, the size of which must comply with I.A.A.F. specifications.

Other sponsorships may become available from a local point of view, such as:

- free time off work to train
- access to use of local facilities at a reduced rate or free of charge
- help with the funding of warm weather training squads
- the involvement of food and drink outlets, providing free packages of their commodities.

There are indeed many areas of sponsorship that can be "tapped into" both nationally and locally. However, the number of individuals who are lucky enough to gain benefit from these areas are ever diminishing, and it requires virtual "star status" at senior level even to warrant consideration.

THE MEDIA AND ATHLETICS

In world terms the sport of athletics has shot to prominence over the past ten years, and its success has meant that media coverage has increased many times over.

T.V. Coverage
Television is the world's most powerful means of communication, and athletics bodies throughout the world have recognised its major importance in the promotion and development of athletics. The IAAF, in conjunction with its exclusive television and marketing consultants, I.S.L., has therefore been committed to a policy of maximising television coverage of track and field athletics worldwide. Similarly, UK Athletics in conjunction with marketing consultants Fast Track is committed to maximising television coverage in the U.K. Television coverage and sponsorship have a very close relationship; sponsorship and the development of the sport have a very close relationship. Consequently, television coverage and administration/development of the sport are closely intertwined. The U.S.A. television company A.B.C. paid in the region of $450 million in television rights fees to cover the Barcelona Olympic Games; these fees will probably escalate in future years due to increased competition from private television, satellite and cable.

Table 17.1 illustrates the time and audience numbers for various televised events from 1988 to 1991. Table 17.2 reflects the audience numbers for UK televised events for 1999.

Press and Radio
The majority of international competitions, at home and abroad, are covered by press and radio and, because many top performers also compete for local athletics clubs, many national (interclub) competitions are also reported. Both agencies are important in covering items outside competitive results and performances, such as human interest stories, to which television will not often devote air time.

POLITICS

In a perfect world, sport and politics would be separated, but a brief survey over the last 60 years reveals that this is not the case. The Olympic Games is a stage that attracts worldwide attention; a platform that should be reserved for the competitions, they have been used by governments and by political groups for propaganda purposes.

In the 1936 Berlin Olympic Games, Hitler used the Games for propaganda purposes; Leni Rienfenstahl's film of the games vividly illustrates how this was achieved.

In 1968 at Mexico City, some U.S. athletes used the occasion to publicise racial tension in the U.S.A. Before these games started, Mexican students used the Games to demonstrate social unrest.

In 1972, the organisers were hoping for a Games free from political interference, but their hopes were dashed by their being pressurised by threats of a boycott by African nations if a Rhodesian team competed. The Israeli team, who were held hostage in the Olympic village by terrorists representing the Palestinian cause, all died in the course of the tragic incident.

In 1976, 22 African countries boycotted the Games because they felt that New Zealand should have been expelled following their Rugby tour of South Africa.

In 1977, the Gleneagles convention banned South Africa from international sport. This action was designed to put international political pressure on that country to change its apartheid policies.

In 1980, as a protest against the Soviet Union's invasion of Afghanistan, the U.S.A., West Germany, Kenya, Japan, Canada and New Zealand would not permit their athletes to compete in Moscow. As a consequence, athletes from Communist countries dominated the competition and used this success as a propaganda statement about the strength of the Soviet system.

In 1984 the Eastern Bloc, with the exception of Romania, boycotted the Games in Los Angeles.

Both sport and politics, then, have used each other to effect pressure or to publicise issues.

Table 17.1

	Competition	Programme Countries	Hrs: mins	Cumulative Audience (000s)
1988				
March 20	World 15km Road Race Champs	11	5:38	15,051
March 26	World Cross Country Champs	18	18:17	98,589
July 27-31	World Junior Champs	22	46:33	188,998
August 26	IAAF/Mobil Grand Prix Final	36	64:08	146,027
Annual Totals		87	134:36	448,665
1989				
March 3-5	World Indoor Champs	49	197:43	463,276
March 19	World Cross Country Champs	28	25:36	36,703
April 15-16	World Marathon Cup	32	24:17	74,798
May 27-28	World Race Walking Cup	10	14:15	30,131
Sept 1	IAAF/Mobil Grand Prix Final	44	64:14	157,578
Sept 8-10	World Cup of Athletics	51	159:42	377,406
Sept 24	World 15km Road Race Champs	10	15:00	35,000
Annual Totals		224	500:47	1,174,892
1990				
March 24	World Cross Country Champs	32	34:51	87,109
August 8-12	World Junior Champs	44	47:35	56,101
Sept 7	IAAF/Mobil Grant Prix Final	52	65:33	146,087
October 15	World 15km Road Race Champs	33	3:55	5,694
Annual Totals		161	151:54	294,991
1991				
March 8-10	World Indoor Champs	55	191:51	535,693
March 24	World Cross Country	47	54:55	184,365.8
April 21	Champs World Marathon	39	35:04	78,284.5
June 1-2	Cup World Race Walking	38	19:34	135,504
Aug 24-Sept 1	World Champs in Athletics	99	1,563:07	3,326,545.5
Sept 20	IAAF/Mobil Grand Prix Final	52	50:29	155,731
October 13	World 15km Road Race Champs	43	8:34	89,203.375
Annual Totals		373	1,923:34	4,505,327.175
Total		845	2,710:51	6,423,875.175

Table 17.2

In 1999, BBC Sport brought to our living rooms the World Championships in Seville, the Golden League series, top domestic action and the Saturday summer lunchtime equivalent of Football Focus – 'Athletics Focus'. The following tables highlight which athletes and events caught the armchair athletes attention.

1999 World Championship television figures

Date	Events	Peak (millions)	Average
26 Aug	400m; PV	8.6	6.6
25 Aug	110H; TJ; Dec	7.9	6.5
24 Aug	M 400 s/f	7.5	7.4
29 Aug	Jay; Relays	7.4	5.8
22 Aug	m/w l00m; Hept 800	6.4	5.9
26 Aug	W 10,000	6.2	5.2
24 Aug	800m; 1500m; m 10,000	5.1	4.4
23 Aug	HJ; Disc; 110H rd1	4.9	3.5
27 Aug	200m; 400H; w 5000	4.6	3.4
22 Aug	m/w 100m semis	4.5	3.7

An indication of what these figures means can best be demonstrated by looking at the viewing figures for Thursday 26 August when 8.6 million tuned in to watch Michael Johnson's world record run in the 400m. Just 45 minutes after Johnson's run, 6.2 million tuned in to watch Paula Radcliffe's 10,000m race when she collapsed across the line to win silver. That might not seem too special until you realise that it was shown on BBC2 – and that the programme generated a 28.2 per cent share of the total television audience

Non World Championship events

Event	Date	Station	Average (millions)	Peak
AAA Indoors	30 Jan	BBC1	2.8	5.5
Crystal Palace GP	7 Aug	BBC1	2.9	3.3
European Cup	19 June	BBC1	3.2	2.0
BUPA Indoor	14 Feb	BBC2	3.0	2.4
Gateshead Classic	27 June	BBC1	3.0	2.6
European Cup	20 June	BBC1	2.9	2.5
AAA/World Trials	25 July	BBC2	2.5	2.0
Zurich Golden League	11 Aug	BBC2	2.3	2.0
AAA Indoors	31 Jan	BBC2	2.2	1.9
AAA/World Trials	24 July	BBC1	2.2	1.6
Paris Golden League	21 July	BBC2	2.0	1.8
Loughborough Int	23 May	BBC2	1.9	1.6
Monaco Golden League	4 Aug	BBC2	1.9	1.6
Stockholm GP	30 July	BBC2	1.8	1.7

DRUGS

One of the duties of UK Athletics is to use every means at its disposal to eliminate the practice of doping. Monitoring for drug abuse, or doping controls, became necessary when it was discovered in the 1960s that certain athletes were using drugs to enhance their performance or training levels, thereby giving them an unfair advantage over their competitors.

Drug abuse must never be come the norm in athletics, which should be contested by athletes competing on the same basis. However, regrettably, doping offences do occur and, even more regrettably, attract adverse publicity for the sport in the U.K. and elsewhere. Athletics enjoys mass popularity on television and in the press and the subsequent material benefits for those at the top have meant that some people may be tempted to take performance-enhancing drugs. In introducing organised sport to the modern world, the U.K. wished to promote development of values such as health, fair play and honesty through participation in sport. Promotion of such values cannot be served by anyone who considers taking drugs to enhance performance. The U.K. is world leader in the fight against the abuse of drugs in sport.

Prohibited Substances include:

Substance	Effect
Anabolic Steroids	(e.g. testosterone) may improve strength and power, but they can also produce a massive increase in bulk.
Beta-blockers	can be used to control hypertension and cause relaxation.
Peptide Hormones	(e.g. growth hormones) have the effect of stimulating muscle growth and assisting the muscles to recover quickly from intensive training.
Diuretics	can reduce weight by reducing the amount of water the body retains.
Prohibited techniques	(e.g. blood doping, tampering with samples) Fresh blood transfusions of red blood cells may have advantages in endurance activities which are mainly of an aerobic nature, requiring oxygen within the blood to release the required energy.
Stimulants	(e.g. ephedrine, caffeine, amphetamines, cocaine) can increase alertness and reduce fatigue.
Narcotic Analgesics	(e.g. codeine, morphine) are powerful pain killers.

For many years, there was a generally held belief that athletes from the Eastern Bloc Countries were involved in a systematic programme of doping which supplemented their intense training regimes.

Since the break up of the Socialist and Communist Countries, stories and statements from athletes have confirmed this belief. In 1986, the death of Brigit Dressel, a 25-year-old heptathlete from West Germany, following abuse of performance enhancing drugs, served a grim warning to all concerned. Drug abuse is harmful to health either at the time it takes place or in later years. Most of the banned drugs are designed to help sick people; when taken by healthy individuals, the side effects are often unknown and may only come to light many years later.

Testing

In order to catch offenders, UK Athletics. and the I.A.A.F. carry out a comprehensive programme of testing. Sophisticated techniques employed by accredited laboratories can now detect the vast majority of drugs used.

Testing now takes place on two occasions:

Out of Competition Testing

Athletes are selected at random and visited by a Sampling Officer (usually a doctor) at home, at work or at their training base. Samples are then sent to one of the accredited laboratories for testing (often in other countries if athletes train abroad).

During Competition Testing

Athletes are selected at random before the competition, e.g. the authorities will test 1st place, 3rd place and 7th place, whoever they may be. This procedure operates at the English Schools Championships and Inter Club Competitions, as well as at National and International competitions.

While the majority of banned drugs can be obtained only by prescription (or by prohibited means) many occur in medications that can be purchased over the counter for such common complaints such as colds, coughs, headache, hay fever, asthma, diarrhoea and travel sickness. Medications for these maladies contain stimulants such as codeine or morphine which are banned. It is the responsibility of athletes to ensure that they take only medication that has been recommended by the Governing Body. Clearly it is impossible to carry in one's head a list of all banned substances, and in order to help ensure that accidents don't happen, the Sports Council has produced a plastic card which all people in sport should carry with them. It should be handed to the doctor or chemist when medication is being prescribed or purchased.

PUNISHMENT FOR ATHLETES FOUND GUILTY OF DRUG ABUSE

	Punishment		
Substance/technique	**1st offence**	**2nd offence**	**3rd offence**
Anabolic steroids	4 years	Life	
Amphetamines	4 years	Life	
Peptide hormones	4 years	Life	
Cocaine	4 years	Life	
Prohibited technique stimulant	3 months	2 years	Life
Narcotic analgesics	3 months	2 years	Life

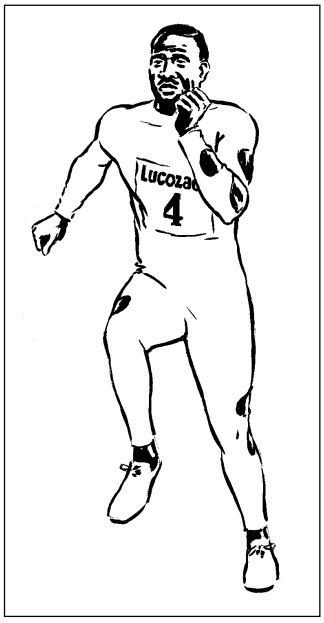
COMMERCIALISM

Athletics has been through many new changes since the "Corinthian" attitudes that existed in the 1920s, exemplified in the film *Chariots of Fire* where Harold Abrahams was treated with contempt for working with a professional coach, Sam Mussabini, and for training as often as three times a week!

Harold Abrahams

- slightly built physique (training 3 times a week)
- leather running shoes with long spikes
- running on cinder track
- had to dig holes for feet to go at the start with a trowel and hand timed races
- thick cotton vest and long baggy shorts to protect his modesty
- athlete travelled second class on rail and boats while team management travel first class

Harold Abrahams (Olympic Champion 1924)



Linford Christie

- greater muscular development due to training as a full time athlete
- high tech running shoes – "Puma"
- sponsors name on competition number
- 'state of the art' lycra clothing
- all in one body suit, skin tight
- bright, vibrant colours on running suit
- automatic timing equipment using electronic pressure pads to detect false starts
- wins a Mercedes car for winning the World Championships

Linford Christie (Olympic Champion 1992)

Sport is undergoing some major changes at the present time. Sport is a reflection of society as a whole, and it too is undergoing some radical changes. In athletics, there are now full-time 'amateurs' competing for their country, who are earning enormous amounts of money, are controlled by agents, promoted by managers, dependent on promoters and influenced by their coach. They travel all over the world, appear on television in advertisements and as guests on chat shows, open supermarkets and endorse various commercial products.

Athletics relies heavily, as do many other sports today, on the help of sponsors to make things possible.

The Grand Prix events, for example, are now big business both to organise and to execute. The large boardings which appear on the track perimeter cost money, the amount depending upon which part of the track the board is situated. The whole event, however really depends on whether or not television will cover the meeting. Indeed, the current situation is such that local meeting promoters are paying large sums to engage the services of television companies, therefore making sure of satisfying large sponsors by attracting wide coverage. The very best athletes will have pre-arranged an appearance fee together with added bonuses for winning or setting records. Athletes may well pick and choose their events/meetings to avoid meeting other athletes until they meet in the major championships.

The timetabling of the event may well also depend on the television companies. For example the "Dream Mile" race held at the Bislett Stadium in Oslo has for the last few years started at 11.20 p.m. (local time) in order that the race can be transmitted live on U.S.A. television at a reasonable viewing hour, i.e. 14.20 on the west coast and 18.20 on the east coast.

Increasing commercialism within the sport has brought it to the point where the difference between "amateur" and "professional" is not clear. Whereas the sport may not yet be considered "open", there is certainly an opening of attitude. What is clear is that commercialism is a major factor effecting change in athletics today.

For example:

- Television can control the timetable of events.
- Sponsors hold the purse strings and may well have some part to play in the calibre of athletes they expect to compete.
- Agents and athletes decide what financial reward they can expect to receive.
- Local meeting promoters have the difficult task of trying to ensure that everyone is kept happy, which may well require some fairly ruthless decisions.

This situation, however, only affects a tiny percentage of top athletes. International stars like Maurice Green, Michael Johnson, Gabriela Szabo, Marion Jones, and British athletes Linford Christie, Liz McColgan, Colin Jackson, Steve Backley, Denise Lewis, Jonathan Edwards, Sally Gunnell and Iwan Thoams are able to make very comfortable livings from the sport. For everyone else the traditional amateur definition still applies, and most athletes have full-time jobs because they cannot make a living from athletics; for them the enjoyment comes from taking part, and from the intrinsic rewards in winning or in producing a personal best performance.

Further Information

English Schools AA Award Scheme
This scheme is offered by BOY's and GIRL's strands, at both PRIMARY and SECONDARY levels.

The standard athletics events feature in the secondary band, with shortened distances in sprinting events for the younger age groups. The primary award encompasses more special modifications and in this award ball throwing is the only throwing activity on offer.

Ten parallel indoor schemes for both age bands cover Standing Long Jump, Standing Triple Jump, Sargent (or Vertical) Jump, Shuttle Run, Harvard Step Test, Hurdles Run, Shot Put, Target Ball Throw, Seated Ball Throw.

In the outdoor section, awards are offered at Gold, Silver and Bronze levels in individual events, or at Triathlon for a 3 event total. Indoor awards are made for an aggregate of four event bests.

There are no certificates. Badges currently cost 50p each, half of which goes to the organising school.

Contact:
Mr D. R. Littlewood,
26 Newborough Green,
New Malden,
Surrey
KT3 5HS.

Tel: 0208 949 1506

CGU Shine Awards
The CGU Shine Awards provide all young people with exciting and enjoyable athletics challenges.

The CGU Shine Awards replace the 5 Star, 10 Step, Magic Mac and Thistle Awards.

Young people are encouraged to 'shine' regardless of their age and ability.

Young people are rewarded for their efforts with certificates and medals.

The CGU Shine Awards provide an all-year round athletics programme for schools and clubs.

Fitness, Sports Hall Athletics, Cross Country and Race Walking awards are available as well as traditional athletics awards.

For more information please go to the website:
www.cgushineawards.com

Contact:	UK Athletics 10 Harborne Road Edgbaston Birmingham B15 3AA
Telephone	0121 456 5098
Fax:	0121 456 8752
Email:	cugshineawards@ukathletics.org.uk

COMPETITION OPPORTUNITIES

Athletics in Schools

Many schools organise inter-school competitions which are normally conducted outside curriculum time. Traditionally a full athletics meeting such as a dual meeting or triangular meeting demands many staff to officiate and many hours to complete. Some schools have surmounted this problem by modifying or simplifying the form of the competition by limiting the programme, e.g. a jumps only, throws only or track meeting, or by training pupils to officiate.

For most young athletes, competition at school is organised by the District Schools Association in the form of a championship which also serves the purpose of a selection meeting for selecting a team to represent the District at the County Schools Championships. The County team then competes in the National Schools Track and Field Athletics Championships held annually in England, Scotland, Northern Ireland and Wales. There are fairly strict entry standards which need to be achieved in order to compete. These championships are at Junior (Under 15), Intermediate (Under 17) and Senior (Under 20) age groups and for the super elite, the first two places in the Under 17 age group compete in the Home Countries Schools Athletics International match. In addition, there are also National Schools Championships for Walks, Combined Events and Cross Country.

Very few athletes reach the higher echelons of international competition without having competed at the National Schools Championships at some stage in their early careers. However, it is surprising to note that it is not necessarily the winners or indeed finalists who go on to compete at national or international level, but often those who have the determination to continue in the sport despite setbacks and difficulties.

Athletics at Clubs

The majority of school age athletes belong to a local athletics club. It is from here that they receive proper coaching and compete in local/national athletic leagues; the club also provides a social focal point for young people. Athletes go to the athletics track to carry out their training right through the whole year. Although some people think that athletics training only occurs during the summer months, this is not so; it is during the winter that most training is done, leaving only fine tuning during the summer.

Athletes compete at Under 13 (boys/girls), Under 15 (boys/girls), Under 17 (men/women), Under 20 (men/women), Seniors level (over 20) and as Veterans, (i.e. over 35 for women, and over 40 for men).

There are around 1700 registered athletics clubs in the U.K., many of which cater only for joggers and road runners. The jogging boom of the early 80s created a need for people to get together to train and compete and so there has been a vast increase in the number of road running clubs that have come into existence.

As stated earlier, athletics coaches usually operate at an athletics club. These coaches learn their craft by working with athletes of different ages. There is a comprehensive coach education programme in the U.K. which provides a framework for coaches to improve their knowledge of the various events. In addition, the UK Athletics Education Programme offers a Teaching Athletics Certificate for teachers at Primary and Secondary level.

Natural talent is needed to achieve good levels of performance. High level performances can be achieved quicker if an athlete has a good coach to direct and oversee the training programme, and properly conducted training will lead to future progress in the sport. Many athletics clubs have the use of a synthetic track, but many more still use an older cinder track or even a school grass track. There are now more and more indoor training areas being built and these are very important in allowing athletes to train in a favourable environment, thus making our coaching lives easier and our work more effective. It is much easier to practise and learn in a warm and dry environment rather than on a cold, often wet outdoor track. Some clubs have use of an indoor sports hall or school gymnasium during the winter, and a great deal of useful preparation work can be done there.

Useful Reading, Publications and Resource Material

Know the Game – Field Athletics	*Carl Johnson*
Know the Game – Field Athletics	*Carl Johnson*
Safe Practice in P.E.	*B.A.A.L.P.E.*
Athletics – Keep It Safe	*A.A.A.*
Sprinting and Hurdling	*Peter Warden*
Throwing	*Max Jones*
Endurance Running	*Norman Brook*
Jumping	*Malcolm Arnold*
Teaching Athletics 8 – 13	*David Evans*
How to Teach Track Events	*Malcolm Arnold*
How to Teach Jumps	*David Johnson*
How to Teach Throws	*Max Jones*
Skilful Track Athletics	*Dr Nick Whitehead O.B.E.*
Skilful Field Athletics	*Carl Johnson*

Available from: UK Athletics Bookseller
J Hitchcock
5 Church Road
Bookham
Surrey KT23 3PN
Telephone: 01372 452804

Useful Addresses

UK Athletics,
10 Harborne Road,
Edgbaston,
Birmingham,
B15 3AA.
Telephone: 0121 456 5098

British Olympic Association,
1 Wandsworth Plain,
London,
SW18 1EH.
Telephone : 0208 871 2677

English Schools Athletics Association (ESAA),
ESAA,
Mr. D. R. Littlewood,
26 Newborough Green,
New Malden,
Surrey,
KT3 5HS.
Telephone: 0208 949 1506
Fax: 0208 949 1506

Scottish Schools Athletics Association,
Linda Trotter,
357 Skivo Port
Glenrothes,
Fife,
KY7 4RJ.
Telephone: 01592 772013

Ulster Schools Athletics Association,
Graham Moss,
c/o Belfast Royal Academy,
Cliftonville Road,
Belfast,
BT14 6JL.
Telephone: 028 90 757639

Welsh Schools Athletics Association,
Graham Caldwell,
21 John Street,
Neyland
Milford Haven,
Pembrokeshire
SA18 3B2
Telephone: 01646 602187