## PHYSICAL EDUCATION <br> IN THE PRIMARY SCHOOL PART TWO

# PLANNING THE PROGRAMME 

PREPARED BY THE MINISTRY OF EDUCATION AND THE CENTRAL OFFICE OF INFORMATION

LONDON
HER MAJESTY'S STATIONERY OFFICE
1953: Reprinted 1962

## THE ILLUSTRATIONS

The drawings are by R. MacGillivray
The photographs were specially taken by Mrs. E. Tudor Hart Both the drawings and the photographs are Crown Copyright

## PLANNING THE PROGRAMME

This book is concerned with the planning of physical education in primary schools; it should be read in conjunction with Moving and Growing, which contains a short study of the movement of growing children. These two books together constitute Parts One and Two of Physical Education in the Primary School (Ministry of Education Pamphlets Nos. 24 and 25). They replace the Syllabus of Physical Training for Schools, issued by the Board of Education in 1933.

## CROWN COPYRIGHT RESERVED

## PUBLISHED BY HER MAJESTY'S STATIONERY OFFICE

To be purchased from
York House, Kingsway, london, w.c. 2423 Oxford Street, london, w. 1 13a Castle Street, edinburgh, 2109 St. Mary Street, cardiff
39 King Street, MANCHESTER, 250 Fairfax Street, BRISTOL, 1
35 Smallbrook, Ringway, birmingham, 580 Chichester Street, belfast, 1
or from any Bookseller
Price $6 s .0 d$. net

## CONTENTS

| CHAPTER ONE | PLANNING THE PROGRAMME OF PHYSICAL EDUCATION <br> The Hall. The Playground. The Playing Field. Swimming Baths. The Countryside. Apparatus. Shoes and Clothing. The Weather. The Time-table. |
| :---: | :---: |
| CHAPTER TWO | PHYSICAL TRAINING <br> SECTION 1 page eleven <br> THE TEACHER AND THE CLASS <br> Direction and Free Practice. Movements performed in Unison. The Use of Space. Group Practices. Safeguards. |
|  | SECTION 2 page thirteen <br> THE FRAMEWORK OF THE LESSON <br> General Activity. Compensatory Movements. Agility. Further Considerations. Choice of Material. |
| CHAPTER THREE | GAMES page seventeen <br> Infants. Juniors. Size of Pitches. National Games in the Junior School. Planning a Games Period. |
| CHAPTER FOUR | D A N CE page nineteen <br> Movement and Music. National Dances. Singing Games. |
| CHAPTER FIVE | SWIMMING page twenty-three |
| CHAPTER SIX | THE OBSERVATION OF MOVEMENT page twenty-four |
| APPENDIX I | MATERIAL FOR PHYSICAL TRAINING page thirty-three |
| APPENDIX II | G AMES page sixty-two |
| INDEX | to Parts One and Two page seventy |

## chapter one PLANNING THE PROGRAMME OF PHYSICAL EDUCATION

When a teacher takes over a new class he already knows something about it; he also knows what facilities there are for physical education, and so he can begin to lay his plans.

The information about his class will include the number of children in it, the average age, and whether it consists of boys, or of girls, or is ' mixed '. Unless it is a class of entrants he will also know something of its reputation - that it is, perhaps, 'lively', 'responsive ', 'restless', or ' slow'. He will normally have been told by the teacher from whom he has taken over which children need special care, and which of them are likely to be particularly lively and enterprising; the programme followed during the previous year will also have been described to him. This is enough information on which to draw up the outlines of his plan for the year ahead; he can consider, for example, the games to be attempted, whether swimming should be taken, and how much time should be given to the various branches of physical education. Unfortunately many of these decisions must depend not only upon a preliminary estimate of the needs of the class, but also upon the facilities available (whether, for example, there is a hall, or a playing field), and before he can go any further the teacher will have to consider how to make the best use of these, and what improvements he ought to try to secure.
First of all there is the question of space - whether this is available indoors as well as out, whether its surface is hard or grass, how it is equipped, and whether it is ample or meagre.

## THE HALL

If there is a hall it may be available to each class only once or twice a week and its best use on these occasions will have to be considered. The atmosphere of a period taken in the hall is likely to differ from that of one taken in the playground, partly because movement is more restricted inside than it is outside, and partly because it is easier to secure quiet concentration inside when this is necessary, and this may compensate for the loss of some of the exuberance enjoyed outside. Indoors children can wear a minimum of clothing; they can make full use of movements which involve sitting, lying, and rolling, and they can dance and mime, both of which may be difficult to do outside.
In a primary school the hall serves many purposes, and it is difficult to
plan and equip it so that the various needs of assembly, drama, music, play and physical education are met. For physical education a large area of floor space is needed free from such hindrances as cupboards, tables and crates of milk bottles, and from the restrictions imposed by glass doors and walls; above all the floor should not be slippery and should be as clean as possible (the children may use swabs several times a day in order to maintain a scrupulous standard). A stage is often an encumbrance, though it may sometimes be used for climbing and leaping, and movable units which may be built up in various ways in any part of the hall are more useful both for drama and for physical education.
If climbing apparatus is provided indoors it should be of a kind which can either be removed entirely, or drawn back against the walls. A storeroom for portable apparatus is very desirable.

## THE PLAYGROUND

Even if the playground is a small one it will be larger than the classroom, and more spacious than most halls; it is therefore especially suitable for activities which involve very vigorous running, throwing and leaping, and for certain games. Under the stimulus of space and fresh air movement takes on a more exuberant and expansive quality than is usual indoors, so that even when the weather is very cold and the greater part of the period is to be taken inside it is an excellent plan to arrange for the class to have a few minutes out of doors first, though as yet only a few schools are so well equipped with space indoors and out for this to be possible.
It is of course desirable that both the area and surface of the playground should permit vigorous activity, and if no playing field is available on the site or near at hand the playground will have to serve as a playing field (this will limit the choice of games to be played) ; hence, for juniors, it will be especially important that there should be a sufficient area of level surface for their games. In addition to this level area irregular ground including ditches, banks and trees will be much appreciated.

## THE PLAYING FIELD

If there is a field on the school site, field games can play a much bigger part in the programme than is possible when the field is at a distance so
that the children have to travel to it. The size of the field and the condition of the surface will affect the programme. If the field is small and has to be shared by a large number of children it may be possible for each class to play a field game during only part of the year; otherwise the surface will soon be ruined. If the surface is poor it will be unwise to plan for games such as hockey or cricket (though the provision of concrete pitches may make cricket possible).
When a school is situated in a congested district the nearest field may be so distant that regular visits to it are difficult to organize. On the other hand, the children's need for space and their pleasure in playing on grass may be so great that the journey is worth making for some classes during at least part of the year.
When a playing field is constructed it may be possible to retain certain natural features such as mounds, trees, banks and a pond, but it should be remembered that in junior schools a large, level, well-drained area is needed for games. The surface should be well maintained, especially when games involving the use of a hard ball are to be played. Unless the school is a very small one at least two rectangular pitches will be needed, and together these will accommodate only one class at a time. If a number of children are to be sent out to games at the same time the field must be planned accordingly, and it may be necessary to reduce the size of the pitches in order to provide a sufficient number of them. Where there are both boys and girls each should have a fair share of the field, although the girls' pitches need not be as large as those for the boys. If public parks or recreation grounds are used every effort should be made to obtain pitches suitable for junior children. (See page eighteen.)

Even when the playing field is on the school site the children will need something on which to hang their coats and jackets while they are playing, and if the field is at a distance some sort of shelter should be available.

## SWIMMING BATHS

If there are swimming baths near at hand it may be possible for some classes to swim all the year round, and if conditions are suitable even fairly young children can be taught to swim. If the baths are distant it is likely that only the older children will be able to visit them, possibly for part of the year only, but if other facilities for physical education are very limited (if, for example, no playing fields are available) it may be expedient to use the baths, even at some inconvenience, in order to compensate for the meagre opportunities for other forms of physical education.

When a new swimming bath is planned, and particularly if it is to be
provided especially for children, the requirements of groups of young learners should be considered. They need a large area of shallow water bounded by two rails or 'sides', so that they can cross safely and confidently from one side of the area to the other.

## THE COUNTRYSIDE

Some schools, especially those with poor facilities on the site, may be able to make use of the countryside, which often provides interesting opportunities. In some rural schools it is used daily as an annexe to and extension of the playground; when it is more distant it can only be used for occasional expeditions, in the course of which trees, banks, ditches and fields may have to be negotiated.

## APPARATUS

After reviewing his programme in the light of the spaces that are available for physical education the teacher will have to consider the apparatus at his disposal, how much there is of it, and where, if it is permanent, it is fixed. If, for example, all the climbing apparatus is in one playground (often an inconvenient arrangement), and is therefore not always available, he will have to modify his schemes accordingly.
If the teacher is in a position to choose the apparatus he will need to know what sort of opportunities are presented by different types.
In plate 1 a net has been stretched over a horizontal pole which is about 10 feet from the ground. This has proved to be a useful piece of apparatus for young children; beginners at climbing seem to feel safe on it and it is large enough to accommodate a group. While confident children may go straight to the top and climb over and down the other side, the more timid may take many weeks to achieve this feat and will be content to gain confidence slowly at the lower levels. Some children climb up the uprights and others use the underside of the net for somersaults and other feats.
A net can also be fixed at an incline against a wall (like a lean-to) or set in an upright position between two vertical supports.
In plate $7 a$ the children are using two parallel ropes. The ropes can be fixed between two walls in the playground or across the corner of a hall, between one wall and a steel upright, or slung from the trunks of two trees. The ropes, which are adjusted by means of pulleys, should be drawn fairly taut so that they swing sideways as little as possible. They may be fixed at any height, but about head height for the oldest group of children will probably be convenient; if this is too high for the
youngest group of children to reach they can use chairs or stools. This type of apparatus can be used in many ways and is more suitable for juniors than a net.

Plates 2, 3, 4, 5 show simple designs carried out in steel tubing. Unlike the net and ropes, they are permanently fixed.

Ropes and rope ladders do not perhaps provide as much variety of activity as some other types of apparatus, but they are a source of pleasure and of very great interest to children at all stages in primary schools. (See Part One, figs. 14, 87, 90, 113.)
Plates $6,7, b, d$ show examples of portable apparatus that are useful in many ways. Ladders can be supported and fixed at an angle by hooks over a wall or on a window sill. They can also be fixed horizontally at varying heights on supporting stands (plate $7 d$ ) or on rafters in a playground shelter.

Wooden planks may be placed horizontally or at a slant. Care must be taken to see that the plank is firmly fixed; hooks should be attached to the end, or a piece of wood fixed underneath (to give it a ridge) in order to steady it.
Both ladders and planks may be used in conjunction with fixed apparatus whether indoors or out, and can be arranged in many different ways.

A wooden pole of suitable thickness and with a smooth surface is also useful (plate $12 a$ ). Steel bars can sometimes be fixed at varying heights between the steel uprights of existing playground shelters.

Strong, well-constructed wooden boxes or tables are useful for climbing, or for jumping on and off in various ways.
Trestles which have been designed with a firm and steady base act as useful supports for a variety of apparatus (plates 7, $b, d, 12 b$ ), and many schools have made use of tree trunks (plates 8, 9), stones (plates 10, 11), walls (Part One, fig. 5), trees (Part One, figs. 8, 9, 39, 63) and ditches (Part One, fig. 40), or of old disused furniture (plates 12, $c, d$ ).

The children themselves learn by experiment how to place and fix pieces of apparatus in position. This provides excellent training for the children and at the same time gives an added interest to their work.

Only a few examples of apparatus are shown here; many other excellent types have been devised.
From various experiments it has been found that apparatus designed in the form of a square does not afford quite the same freedom as apparatus of a more open structure. The range of activity is inclined to be limited at the corners, and when the centre of the square is used for
swinging this may interfere with the children working on the sides. One of the obvious advantages of a square-shaped piece of apparatus lies in its stability, and this kind of apparatus can be used successfully in schools where the number of children is small.

When using wooden apparatus such as planks and ladders it is advisable to see that the wood is well seasoned, and that it will not crack or splinter. The width of the plank must be considered if it is to be used for such activities as running up and jumping off the end; it should be wide enough for the child to place one foot beside the other quite easily so that there is no danger of slipping off to the side.

When the provision of any playground apparatus is under consideration it is essential that expert advice on its construction and fixing should be obtained. All apparatus, whether fixed or portable, must be perfectly stable and secure so that children may use it with complete confidence; indeed it is advisable to have some types of apparatus bedded in concrete. Any bars or tubing must be of suitable diameter for children to grip, and of sufficient strength to maintain the strains and stresses of weight in movement. It is a disadvantage of metal tubing that in cold weather it is painful to grasp.

Ropes, rope ladders and nets must be fixed in such a way as to avoid friction, and the rope of which they are constructed must be of sufficient strength to take the strain that will be put upon it. A rope which has been secured round a tree or over a branch will have to withstand considerable friction, and expert advice should be obtained before such apparatus is put into use.

When climbing-apparatus is to be used entirely out of doors it will have to withstand all weathers. Steel tubing can be preserved by painting (which at the same time gives a better finish to the apparatus); ropes, rope ladders and nets will require special treatment.

It is essential that all apparatus should be constructed of material that will withstand the strains and stresses to which it will be subject, and it should be inspected carefully at regular and frequent intervals.
Fixed apparatus should be situated so that it interferes as little as possible with the surrounding space, whether this is in the hall or the playground. Sometimes it may be conveniently placed in a recess, but it should never be too close to a wall or to anything which might obstruct its use or be a likely source of accidents.

In order to avoid overcrowding it is preferable to have several smaller pieces of apparatus rather than one large piece and to place them separately in different parts of the hall or playground. If more than one class is
likely to be at work at the same time it may be necessary to divide the apparatus between different playgrounds, or between the hall and the playground.
In addition to climbing-apparatus a plentiful supply of small equipment should be available. This may include balls (various kinds and sizes), ropes, bats, hoops, poles, skittles and canes. This equipment should be kept in containers which can be carried easily and stored when necessary. A set of small individual mats is useful both for the playground and the hall, as well as a few larger fibre or rubber mats for agility purposes.

## SHOES AND CLOTHING

Children cannot be fully agile if they are encumbered by too much clothing, or hampered by unsuitable shoes; indeed some activities may have to be cut out of the programme as being too dangerous unless the children are suitably clothed and shod. No child can feel confident if he tries to jump over a high obstacle in the hall or playground when he is wearing boots, or to play games on a muddy field in plimsolls, and most everyday clothing restricts mobility.

In many schools the children either change completely or strip to the waist for their physical training. Obviously these practices must be modified in cold weather, as well as for children who are susceptible to cold and for those who have returned to school after an illness. It is often advisable for an extra garment to be worn at the beginning of the period and removed as soon as the children have warmed up. However hot the children may be at the end of a period they should get fully dressed (preferably after a rub-down) in order to prevent too rapid cooling. Even young children learn to change quickly and the time taken should be regarded as a necessary part of health education.

No doubt most teachers will be able to persuade parents to allow their children to wear proper shoes and clothing for physical education*, but the Head may be able to help by discussing the matter with the parents

* Under Section 5 (3) of the Education (Miscellaneous Provisions) Act, 1948, a local education authority may provide clothing for physical education.
when a new pupil is admitted, by inviting them to see the work and by gaining the support of the school medical officer.

Facilities for the storage of shoes and clothing are inadequate in many primary schools, but some schools have devised admirable arrangements. Few schools have showers, but in many it has been possible to install foot-baths.

## THE WEATHER

Where facilities are sufficiently varied and generous it may be advisable to concentrate on indoor work during the worst of the winter months and on outdoor activities during the summer. Thus in any one week or month the programme may lack balance, but this can be adjusted in the course of the year.

## THE TIME-TABLE

The amount of time allocated to physical education usually depends mainly upon the Head's assessment of the needs of the children. He will have to consider the facilities that are available, and make a plan in order to ensure that these are shared. Sometimes the amount of space (both indoors and out) in relation to the number of children means that each class can get a fair share only if the time-table is closely planned and rigidly followed; but in some schools where the space is more generous its use need not always be restricted to set periods. In most schools it is possible to make a plan for wet weather so that the hall is freed when the playground or field cannot be used, and whenever practicable classes should be allowed to make up the time lost through bad weather. Teachers should of course know of any periods when the hall or playground is not specially allocated so that they can, if they wish, make use of them. As far as possible the hall should not be used for activities, such as, for example, singing, for which a large space is usually unnecessary, and if it is used for dining the tables should be set up as late, and cleared away as early, as possible. If there is a dining-room it can often be cleared during part of the day so as to free the hall for physical education for longer periods than might otherwise be possible.

## SECTION 1

## THE TEACHER AND THE CLASS

In THE COURSE of 50 years the relationship of the teacher to his class has changed considerably, and in physical education, especially in the periods which are usually known as 'physical training' (as distinct from games, dancing and swimming), the change has been particularly noticeable. In the days of 'drill' when large numbers of children were sent out into the school yard for exercise it seemed convenient to arrange them in straight lines and to keep them there while various parts of the body were bent and stretched to the teacher's commands. The teacher chose a position from which he could easily dominate the class and delivered his commands in ringing tones. Today, generally speaking, the relationship between the teacher and his class in physical training lessons is similar to his relationship with them in the classroom. Sometimes he finds it convenient to move away from the children in order to observe and, when necessary, to direct the class as a whole; but more often than not he moves among the children helping each one to produce his own best effort. Sometimes the initiative lies with the teacher, sometimes with the children. 'Drill' demanded not only ringing commands, and the ability to memorize them, but also an immense effort to maintain the pace of the lesson, which was inevitably slowed up by the formal methods used. Quite often the teacher worked much harder than the children. Today the teacher still works hard, but in a different manner, and he demands more of the children.

## DIRECTION AND FREE PRACTICE

The balance between direction and free practice cannot be determined, but only discussed, in a book. When the work is wholly planned and directed by the teacher the children need only listen and obey, and if the work always demands a uniform response many children may be led to produce a minimum effort. If the teacher provides the general framework and then allows the children to make their own discoveries in their own time he not only opens up for them a different sort of opportunity, but makes a different kind of demand on them. Under these circumstances
some children will show great enterprise, some will work steadily, and some will flit from one thing to another without exerting or extending their powers. It is sometimes said that all the teacher need do today is to provide apparatus, lead the class to it, and then merely regulate the traffic; but where this happens progress, and with it zest, falls off after a few months. The general pattern of the work is guided by the teacher's planning both of the year's programme and of the next period ahead, and while work is in progress the teacher's skill is constantly exercised in trying to judge when and where to give help, when to leave a child to make mistakes, whom to urge to greater efforts, and whom to steady. For example, a child may try to throw a ball overarm but be unable to throw far because he has the 'wrong' foot in front; he may be the sort of boy who is quick to find a better way of doing things-if so it will clearly be unwise to interfere; but if he persists in hampering himself, and especially if he seems likely to set up an awkward habit, it will obviously be sensible to suggest that he should try another way, or to show him how to do it. Children will, as suggested in Part One, learn much from their own exploration, for example in leaping, but the time will come when they want to know either how to jump higher, or how to do a particular type of jump. The teacher's knowledge both of the progress of each child and of the way in which mastery of movement is developed is in constant demand, and the timing of help so that progress is neither forced nor checked requires much skill.

## MOVEMENTS PERFORMED IN UNISON

When a number of performers are arranged in a formation and work together in unison the effect is often pleasing to the spectator, and for this reason such an arrangement is often used for demonstrations and displays. The eye is caught less by individual skill and endeavour than by a series of patterns. The main preoccupation of both leader and performers is with uniformity, and in order to achieve this the movements must be so well known that they can be performed without hesitation and almost
automatically. There is no doubt that some teachers enjoy producing this kind of effect, and that some children enjoy working in this way. The advantages and disadvantages of working to a common tempo should be compared with those of working individually; it is certainly very doubtful whether uniformity is worth striving for before children reach a stage when they find it easy to achieve; if it is striven for too soon the whole of their attention is likely to be devoted to ' keeping in time ' while the quality of their movements suffers.

## THE USE OF SPACE

If children are required to work in unison they will be helped to achieve it by working in a formation; if they are performing similar movements but working at their own individual tempo a formation is unhelpful.
The relationship of the teacher to the class is of course affected by the various arrangements and groupings adopted. If the class is in files with the teacher in front (and especially if the teacher is on a platform), the relationship of the teacher to the class is a remote one; it changes at once when the class moves into a semicircle round the teacher. When children work individually they need to scatter so that they have plenty of space for their own efforts, and this arrangement makes it easy for the teacher to observe and coach individuals. Incidentally, if children learn to move freely and yet to avoid each other in the comparative safety of the playground or hall they may be helped to avoid accidents in other surroundings.
Sometimes, for example, when children are asked to run fast in a crowded space, it will be wise to demand that they should move in the same direction; sometimes a movement may be observed most easily if all face the same way.

## GROUP PRACTICES

Group practices were first introduced with the object of providing variety, of sharing the apparatus, and of developing a sense of responsibility in the children. Too often the arrangement resulted in the formation of four long queues each regulated by a leader who repeated a command while the rest of the group performed in turn. Most teachers have now modified this practice so that even if the class is divided into four or six groups in order to share material the children now work individually, or at most join up in threes or fours. Thus each child is responsible for his own efforts, and does not necessarily attempt the same feat as everybody else in the class He can, for example, raise the height of a cane he is trying to leap
over, or alter his distance from a target according to his skill, or if he is climbing he can invent his own method. Sometimes, of course, a group of perhaps six or eight may work at something new or difficult under the teacher's direction, but when group work is in progress the groups are not usually noticeable until perhaps at a change of activity they come together for a moment, or unless they are wearing colours in order to play a game.

## SAFEGUARDS

Responsibility for the safety of the children in their charge naturally weighs heavily upon most teachers. Anxiety is sometimes acute because children are encouraged to play freely on apparatus of various kinds; yet this is only an extension to older age groups of the kind of thing that has been practised in nursery schools (with their climbing frames, ladders and chutes) for many years. Most teachers of reception classes in infants' schools would agree that the children who have previously attended a nursery school are more sure of themselves, and usually safer, than children whose activity may have been restricted at home, and who may have been made fearful and apprehensive by over-anxious parents.
In nursery schools apparatus has been used under certain conditions and in the interests of safety it is worth considering them. The numbers in nursery schools are comparatively small, and there is usually sufficient apparatus for the children to choose from without overcrowding; moreover the children have plenty of time, and are aware of this. As a result the children rarely crowd on to any one piece of apparatus, and it is very unusual to see any child interfere with another. The pattern of the day ensures that a child's energies are not pent up to such a degree that they get beyond the point where he has power to control them.
In those infants' and junior schools where the day is too sedentary the children often react violently when they are released into the hall or playground, and they are then apt to storm any apparatus that may be available and to push each other. Similarly if the physical training lesson does not satisfy their appetite for activity they may show a dangerous lack of control when they are allowed to use the apparatus. If, however, they know that they will get their fill of movement, and if they have been expected to be self-reliant and confident, they will use the apparatus safely, and with common sense.
One other important feature of the way in which children use apparatus in the nursery school is that each child is free to choose what he will do on it. There is no element of competition and no urging to do
something more difficult than the child himself chooses. From experience already gained in other kinds of primary schools it appears that the older children are also perfectly capable of assessing their powers, and that they do not attempt the feats of the few very agile children provided that they are not urged to reach a common level of achievement, and that a competitive attitude is not encouraged. When faced with a new movement or an unknown piece of apparatus most children usually show caution, and explore the situation carefully until they have thoroughly tested their powers. This caution and the tendency to careful exploration are evident in children at all ages within the primary range.

Perhaps nothing has done so much for the safety of children in nursery
schools as the attitude of the teachers. While taking all essential precautions to see that the children are not unnecessarily exposed to danger they have refrained from inflicting their own fears upon them, and have encouraged them to be confident and sensible.

Skill is impaired by illness and by fatigue, and when any child returns to school after an illness, or appears tired, he should be encouraged to go slowly until he has recovered.

The heavier pieces of apparatus need to be handled with special care and there should always be a sufficient number of children to carry them with ease. The children should be helped to discover the quickest and quietest methods of moving material, and should be trained to care for it.

## SECTION 2

## THE FRAMEWORK OF THE LESSON

In planning a lesson it is necessary to have a framework to build on. For many years teachers have planned their lessons on a framework (usually known as a Table) consisting of two main sections; the first section, which was based on anatomical considerations, was designed to ensure that each part of the body should be exercised in turn, and the second section was devoted to various activities designed to develop general agility. Until recently it was customary to restrict the use of apparatus to the second part of the lesson, and where this type of framework is used today one of the most usual modifications lies in the introduction of apparatus at any stage of the lesson; activities of a general nature (such as belonged only to the second part) have also been given a more prominent place.

Many teachers are dissatisfied with the effects of movement which is derived from an anatomical analysis because they consider that exercises in which various parts of the body are moved in isolation produce stilted rather than fluent movement; neither are they satisfied that the exercise of various joints in turn leads to a total pattern of integrated movement. Some of these teachers have therefore adopted a framework based on such terms as ' mobility ', 'strength' and 'agility'. The use of this kind of framework certainly leads to movements of a general rather than an isolated nature, but it has disadvantages because the terms are so general
that it is difficult to assign movements to their proper categories. For example, leap-frog would probably be placed in the agility category, but it is also a mobilizing and strengthening activity, especially for the lower limbs; similar difficulties arise in connection with running (mainly strength and agility), climbing (strength, agility and mobility), and throwing (strength, mobility and agility). The argument against this type of framework is that its terms are so broad that they cease to be useful; it is of course anatomical in origin too, and the teacher who uses it thinks of the body only as a series of joints to be kept supple, or of muscle groups to be strengthened.
Movement is, as we know, more than the sum of isolated movements, or of changes from one position to another. It has an overall characteristic which may be described by the terms rhythm or flow; it is this characteristic, which is dynamic rather than static, which makes movement difficult to describe adequately and satisfactorily. One approach to the problem has been to describe movement as a variegated pattern in which elements of strength (varying from strong to weak), time (ranging from quick to slow), the path of the movement in space (direct or circuitous or twisting), and flow (free or restricted), are combined. Thus the general characteristics of an overarm service in tennis would be described as vigorous, quick, twisting, and of a freely flowing character, while a volley
would be described as moderately vigorous, quick, direct in path and restricted in flow. Whisking an egg would demand a pattern of light, quick, circuitous movements with fairly free flow, while the use of a saw would demand stronger, slower, direct movements in which the flow would be restricted. One of the advantages of this sort of description is that it combines several characteristics and is not confined to a single one.

It is likely that no single framework will be satisfactory for all purposes; the important thing is that the teacher should understand those he uses, and know clearly for what purpose he uses them. Many teachers will wish to draw up their own frameworks, and to vary them according to the needs of their classes. The following example is given in order to help those who need guidance:

## GENERAL ACTIVITY

## COMPENSATORY MOVEMENTS

(a) Trunk movements
(b) Arm and shoulder girdle movements
(c) Foot and leg movements

## AGILITY MOVEMENTS

## GENERAL ACTIVITY

The first part of any period should provide an easy transition from the kind of activities which can be followed in the restricted space of a classroom to those which can be pursued only in a comparatively large space. As soon as each child arrives in the hall or playground he should be able to make a start and apparatus should be immediately available. Very often the first few minutes will be spent by the children on activities of their own choice; afterwards they may all take part in some that are suggested by the teacher. At this early stage in the period, when many of the children may not have warmed up, the activities chosen by the teacher should not be of too exacting a kind. Games of chase, play with balls, easy running practice, and jumps of various kinds are suitable, but activities in which the children are asked to perform at the limit of their capacity are not advisable.

The amount of time taken up by general activity will depend on the needs of the class. A period which is planned for very young children may consist entirely of general activity, and the greater part of the time may be spent by the children in working individually at activities of their own choice. Children at the top of the primary school may only need to spend a short time on this section of the lesson, though again there may be occasions, especially in cold weather, when much of the time will be spent in this way.

## COMPENSATORY MOVEMENTS

The term compensatory is used here to describe those movements which are intended to compensate for the limitations imposed on growth and development by inadequate opportunities for movement, whether at home or in school, by ill health, or by unsuitable clothing.
The degree to which teachers use compensatory movements must depend on the age of the children, their needs, and the facilities that are available. If plenty of climbing and other apparatus is available, and if the children are not encumbered too much by clothing, most of their activity will, incidentally, have a compensatory effect; and if space and apparatus are freely available throughout the day the teacher may feel that specific movements need not be taught. But very careful observation is necessary in order to ensure that, over a period of time, children do not always do the same things, and that they do not, as is very likely when they are left to themselves, do them only in their own way. Thus in the absence of direction the habitually slow may never learn to accelerate, the stiff may always choose activities which do not demand mobility, and those who move heavily may never acquire any resilience.
Compensatory movements are classified in this book under three headings: (a) Trunk, (b) Arm and shoulder girdle, (c) Foot and leg. Whether movements from all three categories should be included in any one period must rest upon the judgment of the teacher, and where more than one compensatory movement is included he must also decide upon the order in which they are to be practised. If in the general activity running and leaping have been practised extensively it would probably not be expedient to follow them by vigorous movements for the lower limbs; if climbing and swinging have been emphasized, compensatory movements for the arms and shoulders should not be arranged immediately afterwards and may well be omitted altogether.
A list of compensatory movements will be found in Appendix I (pages thirty-four to forty-seven). Some examples are given here:

## Trunk Movements

(i) Lying on the back with the knees raised to the chest ; hip rolling from side to side to touch the floor with the knee.
(ii) On a bench. Sitting with the knees bent and the feet raised just above the bench; spinning round to face the opposite direction.

Arm and Shoulder Girdle Movements
(i) Arm circling.
(ii) Lying on a bench; pulling along it.

## Foot and Leg Movements

(i) Dodge and Mark (see Appendix II, page sixty-four).
(ii) Walking along a pole (barefoot).

## AGILITY

Agility movements are intended to bring into action the full resources of the children in such activities as leaping, vaulting, climbing, running, games and games practices. The time given to agility may perhaps be regarded as a recapitulation of the first part of the period; the activities included will be of the same kind (and will therefore be found in Appendix I under ' General Activities'), but will demand a higher degree of speed, or strength, or dexterity, or some other kind of skill. For example, at the beginning of the period the children may, at first, run, leap, and throw balls exuberantly, and then, with the teacher's help, try to reinforce their skill; but the last phase of the period will be used for intensive practice, for the introduction of new developments, and for helping each child to extend his powers fully.
The work can be arranged in many different ways. Each child might work individually at something of his own choice; or all might work individually at something suggested by the teacher - for example, at different forms of leap-frog. Another arrangement might be to divide the class into several groups according to the apparatus to be used, so that some might play a game, some might climb, others balance on various pieces of apparatus, and others practise jumping. Under this arrangement most of the children would work individually and at their own level, and the pattern would be one of general activity rather than of several distinct groups.

A period based on a framework of this kind does not fall into two parts, each taking half the time that is available; it falls into three phases which will differ in duration according to the needs of the class. In each of these
phases individual choice of work, class work, and work on apparatus may be included, and although the degree of vigorous movement may vary, the choice of movements and the management of the period should be of such a kind that activity flows naturally and easily.

## FURTHER CONSIDERATIONS

(a) It has already been indicated that some teachers have planned their lessons on a framework based on mobility, strength and agility. Many teachers will no doubt wish to work on these lines, and those who prefer to use some other framework may wish to widen the opportunities it provides by considering movement in terms of mobility and strength in addition to general activity, compensatory movements, and agility.
For example, a compensatory movement may be chosen in order to exercise a certain part of the body, but the teacher may well deepen the purpose of his choice by considering also what effect the movement will have-that it may mainly develop strength or mainly increase mobility.* For example :

PART OF THE BODY Trunk

| Arm and Shoulder | To develop mobility |
| :--- | :--- |
|  | To develop strength |
| Feet and Legs | To develop mobility |

To develop strength

MOVEMENT CHOSEN
Lying on the back; roll on to the side and curl up as tightly as possible; roll over on to the other side and stretch out as far as possible
Rocking-horse (see Appendix I, fig. 73)
Continuous arm swinging forwards and upwards
Crouch jumps
Sitting, ankle bending and stretching Standing, kicking the hand held at shoulder height
Hopping on one foot Jumping

[^0]In using these additional terms of reference in relation to his choice of movement the teacher will deepen his judgment of the needs of his class.
(b) In addition to these two ways of considering movement it has been suggested that it can also be thought of as a combination of the qualities of strength, space and time. Some teachers use these qualities as the framework on which to plan their lessons, and many use them to add both variety and richness to work planned in the first place on another kind of framework. A framework built on strength, space and time is not included here because its use depends upon the ability of the teacher to evolve movements freely, and this capacity cannot be developed merely by reading a book; it is dependent upon personal experience, and teachers who have had this kind of experience either during their training or at courses afterwards can draw upon it in order to build up the pattern of their lessons. Most teachers have, of course, been accustomed to emphasize some of these qualities in relation to specific movements (for example, they have encouraged children to do a crouch jump slowly, to land softly, to run quickly), but they have not always used them in relation to movement generally, neither have they used them in combination (for example, they have not described a jump as slow - strong - circuitous, or quick - light - high).
Some examples of the way in which these qualities might be used are given below:

PART OF THE BODY
MOVEMENT
Trunk
Lying; curl up, then
stretch out

Kneeling with the hands on the floor; reach under the body with one arm and roll over to lie on the back
(Appendix I, fig. 95)

IN WHAT WAY?
Slowly or quickly or
Curl up slowly and stretch out quickly, or the reverse or
Combine with twisting
Slowly with gradual relaxation or
Quickly and strongly with sudden relaxation

| PART OF THE BODY | movement | IN WHAT WAY ? |
| :---: | :---: | :---: |
| Arm and Shoulder Girdle | Swinging along a bar | Slowly and directly sideways or Quickly with twisting or Slowly with twisting |
|  | Crouch jumps | Slowly and vertically or Slowly with twisting or Quickly, lightly, and directly forwards |
| Foot and Leg | Running | Slowly and strongly or Quickly and lightly or Accelerating and swerving |
|  | Leaping | Lightly and vertically or Strongly forwards or With twisting |

For the sake of clarification one example - that of swinging along a bar - is described fully. It may be done in several ways. Some of these are:
(i) By swinging as slowly as possible (this will involve taking wide 'steps' with the hands), and travelling exactly sideways.
(ii) By means of quick twists so that with each 'step' taken with the hands the body rotates. Because the movement is quick and twisting the 'steps' taken will be short and the whole movement will be comparatively compact.
(iii) By slow twisting movements. Each 'step' will be fairly large and the body will swing outwards in a series of arcs. Compared with (ii) the movement will be spread out.
Various ways of doing this and other movements are not suggested merely as a means of providing variation for its own sake, but in order to encourage understanding of different kinds of effort and to develop versatility.

Much of this may seem confusing at first, but if a start is made with the framework on page fourteen and experience is gained in its use it should
not be difficult to take the further steps suggested and enlarge the scope of the work by referring to the effects and qualities described. The kind of emphasis which is given to the work must depend on the needs of the children and the aim in view. In building up a programme over a period of time it will be necessary to secure not only quantity but also variety and quality.

Whatever kind of plan is followed the teacher should know as much about each child's progress in movement as he does about his progress in language, number, or art.

## THE CHOICE OF MATERIAL

In the 1933 Syllabus a scheme of work was presented in a series of Lessons and Tables. It is now left to teachers to draw up their own scheme, to decide on the framework of their lesson, and to furnish its content. Most teachers will welcome this, because although a considerable amount of guidance is thus withdrawn they will now be able to choose their material according to the needs of the particular class they are teaching, instead of relying upon a centrally-devised scheme. Some material with which to furnish the framework of the lessons will be found in the Appendices.

## CHAPTER THREE

## GAMES

## INFANTS

' At the infant stage most children find a sufficient element of play in the unexpected behaviour of a ball, which is difficult for them to control. As their skill grows they will choose a more complicated situation by collaborating with, or striving against, another child.' (Part One, page fifty-six.)

In infants' schools special periods for games will probably not be arranged, but bats and balls will be used and games of various kinds will arise in the course of the children's play, and will be included in the time set aside specifically for physical education. Some of the seven-year-olds may join together to play a sort of football or cricket in groups of four or five, but most of the children will probably prefer to play with a ball by themselves, or with one other child. Plenty of bats, racquets and balls of various sizes should be provided for them, and as much space as possible should be made available. Bean-bags are a poor substitute for balls.

A list of activities with balls will be found in Appendix I (page sixty).

## JUNIORS

The youngest juniors will be at the stage described above, but as they proceed through the junior school their skill and speed increase and they gradually become ready to collaborate with larger groups of children and to play their part in a team. But even at the top of the junior school
children do not need large pitches, and, if left to themselves, many of them seem to be content with, and even to prefer, small 'sides' and games of fairly short duration.
Most urban junior schools have yet to establish a tradition in games which suits the development of the children, and which is not merely a secondary school programme watered down. In rural areas many small junior schools have either invented their own games or have adapted other games to meet their needs, making the best possible use of irregular spaces, small pitches and small sides. Too often the games in an urban school are dominated by the desire to produce a school team in some national game; pitches are planned and apparatus bought to meet this demand, and although a few exceptional children may flourish under these conditions most of them are not ripe for district competitions.

About forty children are likely to go out to games together, and in the youngest classes this number will demand the organization of six or seven games of, for example, Team Passing (whether this is played with footballs, netballs or hockey sticks). At a later stage (in the middle of the school), when the children are ready for bigger 'sides', only four or five games will be needed for the same number of children.

In the top classes a few children may be ready for a game with eleven-aside, but most children, when they organize themselves, seem to prefer smaller numbers, and the average player certainly gets more chances when the teams are small. It follows that where permanent pitches are
marked, either on a field or a playground, the space should seldom be taken up by a single pitch, but the number of pitches should be sufficient for the number of children who must play simultaneously, and, if possible, be adapted in size to the powers of the players. Thus a field of one acre should have two rectangular pitches in order to provide for a whole class, although the pitches would be rather small for the children at the top of the school. Even with two pitches it will often be desirable to arrange for two games (five- or six-a-side) to be played across each one simultaneously.

## SIZE OF PITCHES

As already indicated pitches will vary in size according to the age and number of the players. Another factor to be considered in relation to size will be the state of the surface. For example, when children play with hockey sticks on a fast and level surface they need a larger pitch than they would if the surface were a slow one.
In view of the various factors to be considered the following dimensions should be regarded only as suggestions.

| $\quad$ Area of Playing Space | Number and Size of Pitches |
| :--- | :--- |
| Hard Surface, $100 \times 150$ yards | Four $70 \times 45$ yards |
| Grass Surface, $1 \frac{1}{2}$ acres | Two $80 \times 40$ or $70 \times 40$ yards |

The choice of games to be played will naturally vary at different agelevels, and a list of possible games (other than the national games) is given in Appendix II.
The type of game chosen in the junior school will evolve naturally from the individual practices in the infants' school and from the individual and group practices of the younger junior children. As already suggested most infants find a sufficient element of play in the unexpected behaviour of the ball, but during the first years of the junior stage the child is increasingly able to make the ball do what he wants, and this development of skill, together with his increased speed and agility, makes it possible for him to enjoy a variety of running, chasing and simple group games (e.g. Dodge Ball in Threes; French and English; Team Passing in Fours).

Towards the top of the junior school the ball practices which at an earlier stage were games in themselves come to be regarded as techniques to be practised in the service of some more complex game, and the older children may begin to enjoy a high level of skill. Good playground games such as Free Dodge Ball are well worth playing regularly so
that a high degree of skill and satisfaction can be attained. There is a tendency to concentrate on national games and to treat playground games as interludes, though some of them are excellent, and under some conditions more suitable than the national games.

## NATIONAL GAMES IN THE JUNIOR SCHOOL

Boys. The two outstanding national games are football and cricket, and it is only natural that quite young boys should want to play them. There is however a world of difference between a child's version of these games and the conventional ones, for when children play them they seem to be content with a small space (as long as they are not prevented from kicking hard and hitting out) and a few players, and are satisfied with a game of comparatively short duration.
If these games are introduced in school a certain degree of skill must have been acquired first or they become tedious; and pitches, rules and conditions must be suitable for young boys.

Of the two games football is the easier to start. The outstanding problem is helping the players to keep in their places rather than to follow the ball about the field in a herd. This is a special difficulty when a heavy ball is used on a large pitch so that the players have not sufficient strength to make the ball move about freely. It is best to start from simple kicking games and to progress slowly to seven-a-side play on small pitches.
An ordinary pitch may be used crosswise so that it accommodates two games, the goals being marked by small poles. The rules should be introduced gradually so that there is a steady growth of understanding without any sacrifice of the genuine play element without which so much is lost.
Cricket is more difficult to teach than many other games because proficiency in it depends so much upon correct batting patterns, the control of length and direction in bowling, and constant alertness in the field. Playing with a straight bat is not a natural action, and the action of bowling, by its very avoidance of the suspicion of a throw, is difficult to acquire. Fielding is more straightforward, but the combined tactics which arise from batting, bowling and fielding are complicated. The development of the game is a more gradual process than is that of others of a less exacting character, and it follows that in the planning of a cricket lesson, and in its coaching, care must be taken to see that the joys of the game are not lost by a too early introduction of intensive methods.

Correct batting and bowling habits require definite teaching, but a wellarranged lesson will also provide the occasion for small group play where every boy will have a fair opportunity of hitting the ball with the bat, of bowling at the wickets, of fielding and throwing the ball in, and of being fully absorbed in play. Many books have been written along these lines, but there is still room for experiment in finding enjoyable and practical ways of introducing this fine game.
Girls. The national game that is most commonly played at the top of the junior school is netball, partly because netball courts are usually available, and partly because of the influence of the secondary schools where netball is often the major winter game during the first year. But it is open to question whether a game such as netball, where running must be severely checked, should be considered an appropriate game for children at a stage when it is their habit to run rather than to walk. Children can be taught the sort of control which is necessary for netball, but hockey, which demands a different kind of control, is probably much better suited to their needs provided that reasonably good conditions are available together with appropriate equipment.

Beginners at hockey, and especially young beginners, need to play on a surface on which the ball travels easily; if this is unobtainable it will probably be best to substitute handball for hockey. The maximum size of pitch for juniors is $80 \times 40$ yards, and pitches of a smaller size are useful. Sticks should be about 17 oz . in weight and from 29 to 31 inches in length. A range of sizes will be necessary.

Lawn tennis is out of the question for juniors unless special racquets of suitable size are available, and many children of ten find the game too difficult in its conventional form; but they enjoy informal games with
light bats or racquets over a string or tape, and can develop considerable skill.
In some small rural schools the girls play cricket as a matter of course, and many more girls would probably enjoy the game if they had a chance of doing so. Rounders is usually a dull game for juniors unless a suitably broad bat is used so that the ball is hit hard and often. Stoolball may be played at the top of the junior school if equipment of an appropriate size is available.

Generally speaking juniors will enjoy the national games most when they play their own version of them. As mentioned elsewhere, sides should usually be smaller than is customary, and the fewest possible rules should be introduced.

## PLANNING A GAMES PERIOD

Most children are eager to start playing a game, and it is probably better to begin the period in this way and to postpone any necessary practices to a later stage. If for some reason games can only be played once a week, practices should usually be confined to the physical training period so that the one chance to play a game is not cut short.
As far as possible any necessary organization should be explained before arriving at the field so that the maximum amount of time is spent in actual play. Equipment should be readily available, and if practices are to be held it is desirable that there should be at least one ball to every two players. The games should be organized so that every child gets his fair share of the play, and his position should be changed if the game does not come his way often enough.

## CHAPTER FOUR

## DANCE

For many people the term 'dance' has fixed associations with certain types of dancing such as ballroom or folk dancing, or with the theatrical art of ballet. This is unfortunate, because these types of dance cover only a limited field, and as they were evolved from adult experience to meet adult needs it is doubtful whether they provide opportunities that are appropriate to children at the primary stage.

Dancing is often regarded as effeminate and therefore unsuitable for boys, yet in Scotland men dance their national dances with grace and lightness as well as with vigour, while in England Morris and Sword Dances were originally danced only by men. The idea that dancing is effeminate has perhaps gained ground because, at present, it is often taught by women, who naturally tend to teach in a feminine way, and who
possibly do not provide adequate opportunities for the boys; but dancing is not inherently effeminate - indeed it may make great demands on vigour and agility.

Complete guidance on dance cannot be given in words. Where national dances are concerned (British as well as European), books of instruction exist, but, as all dancers know, these convey little to the uninitiated; they serve only as useful reminders of dances which are already known. Where the term 'dance' is used in relation to a wider field of movement than that of set dances, codified instructions are out of the question; it is necessary to build up knowledge from certain general principles which can only be fully understood as a result of personal experience.
In Part One the question of the sort of opportunities which dance presents to children was discussed in a general way, and reference should be made to Chapter Four, page sixty.
It must be admitted that where very young children are concerned there is little sound evidence of what constitutes appropriate experience in creative work in movement, and that there is need for widespread experiment. It might be said that, in relation to young children, movement considered as an art is at the same stage as were the visual arts some twenty years ago, when neatness and the ability to copy were regarded as of first importance. Many of the pictures produced by children at that time were as stereotyped as their performance is today of those action songs where movement only consists of accurately reproduced steps and gestures.

Children explore in movement in much the same way as they explore in colour, shape and texture. When, as they often do, they appear to be enjoying the sheer quality of a movement (for example, crouching, bouncing up and down, stretching, punching or stamping), they come nearest to that which we term dance, and which, in children, may be described as a kind of dance play. It is not always appreciated that children often enjoy these experiences in movement for their own sake, and without the need of any suggested imagery. If themes such as giants, rag dolls or snowflakes are used as starting points, the fundamental quality of the movement may be obscured.
Sometimes movements seem to be performed vaguely and with little attention, and sometimes they seem to be considered; sometimes they recur and are shaped into a repetitive rhythm which the child himself may accompany with vocal sounds or on some instrument, and sometimes it is possible for another child or for an adult to provide an accom-
paniment. Children will sometimes move together spontaneously in small groups and perform repetitive movements at the age of five or six years, but they do not as a rule readily combine to move both simultaneously and with similar movements before the age of about seven years. It is worth considering whether it is wise to attempt to induce children to move accurately to a common tempo before they seem ready to do so easily.
As they paint children find out what paints and brushes will do; they discover a variety of tones, tints and shades, and they experiment with shapes and patterns. Similarly in movement they explore the feeling of being strong and broad and sturdy, or very quiet and slow, of whizzing along as rapidly as possible, of stamping heavily, or of becoming limp. In experimenting with these qualities they inevitably make shapes and patterns in space; some of them do this freely and boldly, others in a restricted way. Such movements may lead children to become some character, or animal, with a result which is nearer to drama than to dance ; sometimes in conjunction with other children a dramatic pattern is built up. There is no need to draw, as adults do, a hard and fast line between dance and drama. Sometimes a story, for example that of Ulysses and Polyphemus, may be worked out in movement which we should describe as dramatic; sometimes an idea, such as that of 'shipwreck', may emerge from the character of a piece of music, and be worked out in movement of a dance-like nature.
As children grow older their powers of sustaining an idea should increase. The disconnected and discrepant movements of five and six give place to sustained phrases of a more fully developed character. An idea which at an earlier stage might have been repeated over and over again, but not developed very far, may at the top of the junior school be extended and expanded so that it occupies much time during several weeks, and may take well over an hour to work through when it has been completed to the children's satisfaction. As children pass through the primary stage their readiness to combine in groups grows, together with their power to evolve patterns - whether of a dramatic or of a dance-like character - in which individuals and groups collaborate freely and easily.
It is for the teacher to help the development of individual movement so that it is rich and varied in quality, to support the gradual growth of the power to develop and sustain ideas, and to encourage, as the children become ready for it, the capacity to work in groups as well as individually. Guidance may take the form of explicit instruction, or it may be of the less obvious kind which depends upon the atmosphere created by the
teacher, and on the material, such as stories, pictures and music, which he provides.

Space is of great importance, and a hall is invaluable. If there is a stage it is usually more useful as a second level (a mountain, wall or castle) rather than as the main scene of action; for children, whether they are dancing or acting, not only need plenty of space, but need to be able to use it flexibly. Many schools have no hall and must depend on a classroom with the furniture moved to one side, or upon the playground.

There are very many ways in which periods of dance might be planned, and the following suggestions are given only as examples:
A. Built on contrasting qualities of movement.
(a) Move freely to music.
(b) Experiment with contrasting qualities of movement, e.g. slowness and quickness, or heaviness and lightness. Become aware of these qualities in all parts of the body.
(c) Improvise to a short piece of music which is characterized by these qualities. This might be done individually or in twos, and through repetition might be built gradually into a short movement sequence, thus encouraging memory for movement. or
Two or three children might act as leaders to develop simple group formations (juniors only).
B. Built on the exploration of space.
(a) Move freely to music of a kind which stimulates growing and shrinking in movement, or low and high movements.
(b) Experiment with movements in different directions such as backwards and forwards, or from side to side. Combine these movements with qualities such as slowness and quickness.
(c) Movements in various directions, e.g. ' up ', 'down', 'forwards', ' backwards', taken first in a direct way and then in a circuitous and twisted way.
(d) Move to music with a verse and refrain form. During the verse the children move individually and freely in space; at the refrain they form small groups and move together using movements carried out in two different directions. The 'verse' and the 'refrain' should have clearly contrasted qualities. Percussion might be used instead of music.

## MOVEMENT AND MUSIC

The term ' moving to music' has several meanings. It may mean, for example, moving to a march in $4 / 4$ time, stepping to every beat in the bar; or it may mean moving in imitation of the rhythmic pattern within the bar, as, for example, in skipping (step, hop) to a tune in $6 / 8$ such as I saw Three Ships. Where, as in folk dances, music and movement have evolved together this close relationship is very usual. But the connection between movement and music may be of a much less precise character; for example, the movement may be in accordance with the mood of the music, when the association will only be of a very general kind; or it may follow changes in the dynamic pattern such as crescendo or diminuendo, or strong accents or climaxes.
When children follow music in a general rather than in a precise way they will show many individual differences. For example, a tune of the character of Over the Sea to Skye may result in a general swaying movement, while A Hundred Pipers will probably set most children jigging up and down, but similarity of response will probably end there. Some may travel freely about the room leaping, running, skipping or twirling, while others may confine themselves to a small area sitting, perhaps, or crouching or creeping; some may imitate the rhythmic pattern closely, some may be influenced by the music only in a general way.
It is sometimes assumed that all children can move easily and spontaneously to music, but some only do so with difficulty, while a few are reluctant to do so at all; and it should not be forgotten that to ask young children to move in strict accordance with the music is to demand much both of their powers of listening and of moving. Indeed many adults do not find it easy to move to music unless it is of a stereotyped kind which can be imitated by stereotyped steps.
When children improvise individually and freely, a musical accompaniment cannot be provided, but this is not the handicap that many adults believe it to be, for while music may be a stimulus, it may also be a serious limitation.
Percussion instruments may be used to accompany movement, and the playing of a percussion instrument will often give rise to movement. It may be expected that the sound of, for example, a triangle or a xylophone will stimulate movement of a different kind from that which is stimulated by a loudly beaten drum, while the drum itself may be played by using the hands in different ways, thus producing different kinds of sound which suggest different ways of moving. A child may accompany his
own movements, or he may play for another child, or for a group of children.

Gramophone records are useful because they provide music played by instruments other than the piano.
The teaching of music through movement is outside the scope of this book, but the following suggestions are intended to help those who prefer to plan their work on the basis of a close association between movement and music.
A. (a) Moving freely about the room travelling forwards, backwards, sideways or turning. (To music.)
(b) Crescendo and diminuendo in movement, i.e. growing out into space followed by contracting into the smallest possible space, either slowly or quickly. Practise first without music, later (not necessarily in the same lesson) music might be added.
(c) Staccato movements using all parts of the body in turn. (No music.)
(d) Staccato movements to appropriate music. (Listen to the music several times first.)
B. (a) Move freely about the room making straight paths with sharp turns or curving paths with rounded turns. (To music.)
(b) Very strong, straight, sudden movements. A short series of these, possibly to a drum.
(c) Legato movements using various parts of the body in turn. (No music.)
(d) Legato movements to appropriate music. (Listen to the music several times first.)
(e) Light, quick movements travelling all over the room. (To appropriate music.)

## NATIONAL DANCES

This term is used to include English dances and the national dances of other countries.

As has been explained previously, these dances were evolved as a result of adult experience and to meet adult needs. In those communities where they formed part of the general social pattern children no doubt became acquainted with them first of all by watching them and by hearing the tunes, and later learnt them by joining in with their elders when they were old enough to do so. Today these dances have only a precarious position in society and if it is hoped that they may have a social function for the
children at a later stage it may be questioned whether they should be introduced in primary schools because, later on, the children may, as they grow up, reject them as childish things. This constitutes a real difficulty, which must be weighed against the fact that children, especially those at the top of the junior school, enjoy those dances which are simple in pattern and lively in character. It should be remembered that while it is clearly undesirable that children should be taught to ape adults, the dances will have more life and variety if both boys and girls take part in them together, since their styles of dancing are quite different, though complementary, even at this stage.

The most appropriate dances for children are simple group dances, or couple dances. In the early stages children find couple dances easier than group dances, but both are, of course, unsuitable until the children have reached the stage when dancing with each other, and in time to the music, is well within their powers. Generally speaking, the simpler European dances tend to appeal to children earlier than English country dances because the latter are more patterned while the former depend less on pattern than on steps of a clear and bold character.

When English country dances are introduced it will be found that those that have a simple pattern, and that are buoyant and vigorous in character, are most appropriate. For example, Rufty Tufty, which is of a somewhat slow and sustained character, is quite unsuitable, while Gathering Peascods, which is suitably lively, is too complicated, so that it tends to degenerate into a memory test with much fumbling over the correct use of left and right shoulders. Many junior schools find it advisable to avoid dances in which ' siding' and ' arming' are included, and prefer such dances as The Long Eight, Durham Reel and Galopede.

In national dances the clue to the character of the movement and to the phrasing lies in the music ; children may well discover much about the dance by listening and moving to the music in accordance with its character and phrasing before any reference is made to its form as recorded in a book of instructions. In this way movement and music are likely to agree, and the children will learn to listen intently to the music and to move in accordance with it instead of producing, as they sometimes do, a response which may be correct for the number of steps performed and the direction taken, but which, in quality, bears little relation to the music. The ability of dancers to 'pick up' a dance from the music with the minimum of instruction is a clear indication of their ability to listen attentively and to move sensitively.

Many children will tell an inquirer that they dance with their feet only;
indeed this is often painfully obvious in their stilted movements and their lack of balance as they travel backwards and forwards, change direction, or swing a partner. They should learn that an agile dancer allows the characteristic movement of the dance to travel right through him so that he dances with the whole of himself and not with his feet alone.
Examples of ways in which periods might be planned are:
A. (a) Move freely about the room to music, the quality of the movement to be appropriate to the music.
(b) As in (a) but take hands with a partner for one phrase, dance alone during the second phrase, and join up with another partner for the next phrase, etc. Emphasize phrasing. Partners can link up in various ways.
(c) Couple dance (European).
(d) Group dance (English).
B. (a) (i) Move freely about the room to music, travelling forwards, backwards, sideways, and turning round. (ii) Follow a curved or straight floor pattern. (iii) Meet a partner and lead her in these directions and patterns.
(b) Listen to the music of a new dance. Move freely to the music, getting first the general character, then the phrasing; mark any climaxes.
(c) Begin to learn the form and pattern of a new dance.
(d) A familiar dance. (Group or couple.)

## SINGING GAMES

Singing games were referred to in Part One, Chapter Four, page sixty-five, and nothing further need be added here.

## CHAPTER FIVE

## SWIMMING

It is difficult to decide at what age most children can best learn to swim quickly and easily, but the experience of many teachers suggests that where numbers of children must be taught together most of them seem to learn without much difficulty between the ages of nine and eleven. Of course many children learn to swim before this age, but most usually as a result of individual tuition, although where a school has its own bath quite young children can be taught successfully in small groups. At whatever age children learn to swim the process is quickened if they have had previous opportunities of playing in water, especially if they have been able to lie and float or paddle about in a shallow pool. Children soon discover that water is a very different medium from air, that it slows down movement, and also acts as a support. They find that a toy boat or a ball floats in rather than on the water, so that when they try to swim they need not be surprised to find that a swimmer does not skim along the surface but is partly submerged.

In most schools the age at which children learn swimming is usually dictated by the availability of accommodation at the local baths, and where this is limited most schools give preference to the children in the top classes. In a few districts where there are a number of small, shallow, children's baths it is sometimes possible for swimming to be practised
throughout the junior school. Some nursery and some infants' schools have their own pools in which the children play, and where, though no instruction is given, the beginnings of swimming may be seen.
A beginner needs regular practice, and as soon as instruction is begun it should be continued at short and regular intervals. Unfortunately a class can seldom visit the baths twice a week, but if it is possible to choose between sending the classes of more than one age group once a week, and sending one age group twice a week, the latter arrangement will probably be found to be more satisfactory, especially if swimming must be confined to one term in the year.
Children should, of course, be taught to swim under safe conditions. The water should be clean, and the bottom of the pool should be firm and not slippery. The children will need a rail, rope, or pole by which to steady themselves, and to give support for various practices. The depth of the water is important, for if a child is immersed much above his waistline his balance becomes precarious and his confidence is shaken. Some teachers prefer to teach in water which is so shallow that the children are able to lie prone and to touch the bottom with their hands without submerging their faces. A large area of water is likely to be more alarming to a beginner than a small pool, and if children cannot be
taught in a pool designed for beginners it may be necessary to make temporary barriers with poles or ropes in order to have a small enclosure for them. Non-swimmers are apt to become cold rather quickly, and they do better in water which is kept at a higher temperature than would be usual for swimmers.

If, as is usual, the whole class goes to swimming it will be necessary for at least two adults to be on duty while the children are in the water, and both in the interests of safety and of making instruction effective the children must be attentive and obedient. When children are taught to swim in a river, a lake, or the sea special precautions must be taken.
Many excellent books on swimming have been published both by national organizations and by experienced teachers; they not only give information about the correct performance of strokes, but also suggest methods of group instruction. These books are easily available, and it is necessary here to emphasize only one or two points.

A certain amount of organization can be carried out before the class goes to the baths. Partners can be allocated, and methods of support, and even ways of entering the water, can be practised beforehand. This is specially desirable if swimming takes place in the open air.

Some teachers carry out a considerable amount of stroke practice on dry land, but it should be remembered that movement and balance are very considerably affected by immersion, and that therefore ' land drills' may not be as effective as some teachers suppose. These drills are
probably most useful as a means of giving brief instruction on some particular point after an attempt has been made in the water.

As soon as confidence and freedom of movement in the water have been established one of the most important steps is to learn to glide along the surface. Gliding is the basis of the balance which is necessary for the efficient performance of all strokes, and most teachers agree that it should precede the practice of any stroke. Teachers are not, however, agreed on the question of which stroke should be taught first. The choice usually lies between the breast stroke and the crawl, and the decision will probably be made according to the knowledge and experience of the teacher.

Many teachers make good use of cork or other types of floats both for teaching beginners and for practising certain points at a later stage. It is important that the type of float used should be of a kind that will not disturb the proper balance of the body in the water.

A series of very simple tests by means of which each child can measure his own progress may be very useful. The first tests should be concerned with pre-swimming practices, and the later ones might include head-first entry into the water and diving. The tests should not be competitive, and they should not take up much time either to perform or to record.

The main aim of the swimming programme in the primary school will be to help as many children as possible to learn to swim, and to be agile in the water ; speed and endurance belong to a later stage.

## CHAPTER SIX

## THE OBSERVATION OF MOVEMENT

'How is he getting on?' These are the words with which Part One ends, and in the last chapter of that book the various ways of examining progress are discussed-
'When we consider progress we may inquire " How fast?", "How far?", "How many times ?" and "When?", and we can answer these questions in terms of figures. We may also inquire into quality and ask the question " How?". The sort of questions we ask and the answers we find will depend upon our point of view, upon what we are looking for, and upon what we are aiming at.'

Obviously there are many standpoints from which one can look at movement: there are those of the artist, the cricket coach, the ballet mistress, the horseman, the sergeant-major, the theatrical producer, and many others. All specialists are interested in their particular line and use special terms - 'a leg break', 'an arabesque', 'a good pair of hands' - to describe particular forms and qualities of movement which belong to their own field but which have no significance outside it. The class teacher who is concerned with the general education of children rather than with producing cricketers, ballerinas or horsemen has to decide upon what lines he may most effectively base his observation of the movement of growing children. Observations of the kind that can
be recorded in figures serve as a useful check on the progress made (for example, the number of children who can throw beyond a certain point, or turn cartwheels, or leap a certain height), but it is being able to answer the question 'How?' (in what way does he leap, or throw or turn cartwheels ?) which gives the teacher power to help those who need it. Movement is not an easy thing to observe because it leaves no trace (as writing and painting do); it is easiest to observe when it is repetitive, as in skipping, running or swimming; most difficult when it is least predictable, as in a game, and in the free use of apparatus, or when the expressive quality predominates.
Every teacher who knows which are the exceptionally agile and which the exceptionally awkward children in his class has already begun to observe movement. Starting from these two extremes it is not difficult to learn to discriminate between those who differ from each other less obviously, and to grade the class in three, four or five categories. This of course only implies a judgment of all-round capability which must be modified in respect of different spheres of movement. For example, the children who are excellent at games may show much less ability in swimming, and those who show themselves capable of sustained strength in a contest may be less efficient when they try to concentrate their energies suddenly in order to leap over a high obstacle. A further step in the development of observation might be to estimate the ability of individual children to perform certain feats in which the teacher is confident that he knows what to look for, for example, throwing overarm, leap-frog, or running, and then to try to extend his knowledge so that he knows what to look for in a wider range of activities. If as a result of observing many different activities the teacher can establish lines of observation which he can apply generally he will be able not only to coach certain kinds of performance, but also to help both the vigorous and the lethargic, the jerky and the even, the heavy as well as the light, the angular as well as the rounded.
In a book only 'stills', and not movement, can be shown, so that it is very difficult to give adequate guidance on the observation of movement -indeed it is only possible to give some examples and then to suggest the general lines along which observation might be developed.

## RUNNING

If we watch three children running a race it is likely that all three will be trying to put out their maximum effort ; each will be ' doing his best ', and it is useless therefore merely to urge the slowest one to ' Come on'-he
needs help of a more discriminating kind; indeed if we stand back and observe all the children carefully we shall probably find that not only the slowest but all of them have something to learn.

Look at this boy (1) ; he is working tremendously hard, but his head and the whole tilt of his body hold him back.



1

And now this boy (2); his feet are turned out and his arms move across his body rather than in the direction in which he is running.

The direction of his effort is rather like this:

instead of like this:



And now this one (5); are his strides ' eating up the ground ' or is he running from the knees rather than from the hips? Compare him with this boy (6).


How are we to help these three? By getting the first one to feel the difference between running in an upright position and leaning forward at various angles so that he discovers the most helpful style; by encouraging the second one to find out the difference between running with his feet straight and with them turned out, and by showing him how his arms can be used to help him along; and by persuading the third to lengthen his stride by moving from the hips (6). In order to ' get the feel' of those differences and to practise them, speed will have to become a minor consideration, though later on it will be necessary to practise the management of speed, especially acceleration.
If we asked these children to take off their shoes and socks we might find feet like this (7-9).


In such a case it would be necessary to practise movements developing the elasticity of the feet as well as to prescribe exercises which would help to straighten the toes. We might also find that the whole body, especially the chest, needed movements designed to increase mobility in order to encourage efficient respiration.
In order to try to help these children we have considered (a) the alignment of the body and the direction of its effort ; (b) variations in stride; (c) the management of speed; and (d) the body's structure.

Running will of course play a part in all games, and in all kinds of leaping and vaulting. Sometimes maximum speed will be important, sometimes sudden variations in speed, and sometimes nimbleness in running and swerving.

## JUMPING

Now let us look at two children jumping over a rope. If we could have watched the run-up we might have noticed some of the things we observed in the runners, but because these children want to clear a height rather than to win a race the quality of their run, especially of the steps just before the jump, will be different.

The boy in 11 does not look as if he is going to clear the rope, and if we notice the point of his take-off (which is too far away from the obstacle), his failure will not surprise us. His line of effort will be like this (10) :



This boy (13) has judged better and he will be able to direct his energy upwards more successfully (12) :


There is of course more to it than this. The direction of effort may be effective but the take-off may be of such a kind that the child's energy seems to be thrust emphatically downwards, he sags heavily rather than elevates himself lightly, and his foot, ankle and knee are never extended. In consequence he does not jump high. A few children have a natural feeling for elevation, but most of them can learn, within limits, to make themselves 'heavy ' or 'light'. It is a matter of managing the weight.

After the flight we shall watch the landing. Some children land stiffly and resist the ground; at the other extreme there are children who arrive ' all of a heap'. It is necessary for them to discover when jumping from various heights how to manage their weight as well as to 'give' flexibly in the hips, knees, ankles and feet.

In helping children to jump it may be necessary, as in running, to consider the elasticity of the feet, and since a high jump demands a quick contraction of the knees, hips and spine we may need to introduce movements designed to develop the strength and mobility of these parts of the body.

The various parts of a jump-the run-up, take-off, flight and landingmust be welded into a connected whole. Some children break their effort so that the take-off appears to be an afterthought rather than a natural climax to the run-up.
There are very many ways of jumping and children enjoy trying all sorts of twists and turns unless they are jumping at a height which is near the limit of their powers.
In observing jumping we have considered timing and its effect on the direction of effort, control of weight both in the take-off and in the landing, the rhythm of the whole process, and the elasticity and strength of the body's structure.

## LEAP-FROG

Many children can do some sort of leap-frog, but here two girls are trying not only to clear an obstacle with their legs astride but to carry themselves vertically during their flight $(14,15)$.


The ' back' is sufficiently high for their purpose; if it had been at waist level or below, a vertical flight would have been almost impossible to achieve because they would have been obliged to stoop over their hands (16).


This girl (17) has taken off so far away from the ' back' that although she will probably get over the obstacle she will hardly achieve a vertical position in flight (21) and her path will be something like this (18):


Here (20) the take-off is closer to the 'back'; the line of flight will be more like this (19):

and it will be easier to achieve this position (21). The whole intention is vertical rather than, as often happens, horizontal with the performer peering over the back towards the place where she hopes to arrive $(16,22)$.

Much of what has been written about jumping applies also to leap-frog, but the run-up will be less springy and, though short, more like a sprint in character, accelerating to the point of the very sharp take-off (with both feet together). Once again the run-up, take-off, flight and landing must be welded into one pattern having a characteristic rhythm which differs from that of a jump over a high rope with a take-off from one foot.

## SLOW THROUGH-VAULT

This, as its name suggests, is a slow vault ; the performer swings her legs slowly between her arms while these sustain her weight (23). The whole character of the flight is horizontal rather than vertical, so that both take-off and landing will be at some distance from the obstacle and the feet will trace a slow, continuous arc (24).


In contrast to leap-frog the run-up will be shorter, less like a sprint than a series of bounding steps, and of an almost leisurely character unless the vault is to be performed at a high level, when the 'attack' will have to be more vigorous.

## FORWARD ROLL

In a forward roll the body is curled up and the path of the movement may be represented like this (25) :

the weight being taken on the shoulders (26).


26

This girl (27) has taken up a position with her feet apart from her hands and her arms rigid, and her effort is directed like this (28):


27


28

If she tries to do a forward roll she will first of all balance uncomfortably on her head and then fall heavily on her back.

In a forward roll curling up and rolling softly are essential; beginners will need to use their hands and arms as 'buffers' to steady themseives; but as they become more confident and skilful they will rely on them less.
A mobile spine and the ability to let the weight ' give ' softly are essential for the comfortable performance of rolls.

## CROUCH JUMPS

In a crouch jump the weight is tilted from the feet on to the arms and shoulder girdle. The arms must be firm, and, if a vertical crouch jump is to be achieved, they must be vertical (31). The head is held back in order to preserve the balance; if it were to be lowered between the shoulders the crouch jump would become a forward roll. The line of effort may be represented like this:


29
If it is like this :

a vertical position will never be attained. Even if the arms are vertical and a vigorous push-off is given by the feet and legs the jump may not be successful because the child makes little effort to lift the heavy weight of the hips.
In the recovery the weight is transferred smoothly from the arms to the feet.

## CATSPRINGS

A catspring (32) is so closely related to a crouch jump that many teachers find it difficult to distinguish the essential differences between them and to help the children to do the same. Both jumps start, as a rule, from the same position, and in both the weight is taken on the hands, arms and shoulder girdle: but the effort in a catspring follows a different line of


32
direction from that of a crouch jump:

and the timing is quite different.
While in a crouch jump the hands are first placed on the floor with the take-off from the feet following almost immediately, in a catspring the take-off (forwards not downwards) comes first; there is a moment in the flight when no part of the body is in contact with the floor (32); then the hands come down sharply, the feet following. In character the movement does in fact resemble the sudden pounce of a cat.
A crouch jump is comparatively slow and sustained, while a catspring is quick and sudden. In musical notation the timing of the crouch jump might be represented as $\mid$ d.d and the catspring as $\delta \mid r \vee 7 \delta \delta$
The main differences to observe between crouch jump and catspring lie in the direction of the effort, in speed and in timing.

## CLIMBING

Some children climb ropes quickly and easily while others find it a struggle. The few who have no trouble are usually light in build and seem to have a strong grip, strong arms, shoulders and backs; they often climb with very little help from their feet. But most children have to learn to grip firmly with their feet and legs, and to develop, gradually, more strength. They also have to learn to move economically so that instead of trying to take numerous quick short 'steps' up the rope they first of all reach a long way with each hand in turn, then pull their feet up to a new grip
as near their hands as possible, and then push up again, thrusting their heels downwards in order to brace their feet and legs against the rope.

In order to climb ropes successfully the children will have to develop, through climbing activities of various kinds, strength with which to grip and to pull, and an increasing ability to take their weight on their arms. As in the other activities discussed, the successive movements should become welded into their characteristic rhythmic pattern, and as soon as this happens ease develops.

## THROWING

Here a boy and a girl are throwing and it is at once apparent that the boy's throw (34) will be more successful than the girl's (35). The drawing of the boy suggests flexibility of movement and shows that his whole weight has gone into the throw. On the other hand the girl gives the impression of having merely pushed the ball with a straight movement from the elbow joint, and she has remained upright. In order to improve she will have to learn to use her arm and shoulder rather like a whip, to speed up
her movement and to let her weight swing forwards from her back foot (36) on to her front foot (37). As she prepares to throw she will have to learn to align feet, arms, shoulders and head in the direction of the flight of the ball, instead of standing square with the line of effort awry.


36






These activities have been described for the purpose of providing material for observation, and not primarily in order to give an account of the techniques necessary for their performance. The following summary may serve to indicate some of the lines upon which the observation of movement might be based :

## 1. Direction of effort

This has emerged as an important feature in all the examples given with the possible exception of climbing, where the rope itself imposes the direction of effort. In leap-frog (and in many other jumps) the emphasis is on effort in an upward direction, in running and throwing on effort forwards, and in forward rolls it is directed backwards between the legs. In some jumps, and in many activities not described here (such as climbing over and under ladders and poles, swinging along a bar or rope, and in some pushing and pulling contests), the main effort may not be directed in a straightforward way, but may be twisting, circuitous and flexible.

## 2. Speed

Variations of speed and the management of speed (whether fast or slow) affect performance in running and the run-up in jumping and leap-frog, and mark one of the differences between a catspring and a crouch jump. The management of speed is an essential feature of successful swerving and dodging in games, and is a noticeable quality in many types of movement.

## 3. Strength

Compare the sustained use of strength in climbing with its sudden vigorous use in throwing, or in the take-off for a high jump; compare also its use in a crouch jump and in a catspring. Notice the need to develop strength in various parts of the body (see climbing and leaping).

Strength is used to propel or carry the weight of the body in various directions. The weight of the body should be managed so that it helps rather than hinders movement; for example, it should be put into a throw, and into swinging on a rope or along a pole, it should not be allowed to sag inertly in climbing a rope or in taking-off for a jump, and in landing from various heights it should be controlled so that the performer neither collapses nor jars himself.

The unnecessary use of strength may be seen in the tension which often accompanies and hampers unskilled effort; it is also a characteristic of the everyday movements of some children.

## 4. Mobility

Lack of suppleness in various joints may hamper movement, and we have seen examples of this in running (ankles and feet), in leaping (hip, knee and ankle), in leap-frog (hip), and forward roll (spine). Where awkwardness is observed, it will be necessary to try to decide whether lack of mobility is a main cause, and therefore whether movements designed to increased mobility should be practised.

## 5. Rhythmic pattern

When a movement is performed satisfactorily, its different phases and accents are blended into a pattern which has its own particular rhythm. This rhythm is not only seen but is often felt by the observer, who may find himself 'jumping', 'throwing' and 'hitting' in sympathy with the performer. Sound (for example, the sound of the impact of bat and ball, or of running feet) may also emphasize the rhythmic pattern. Rhythm is a very difficult thing to develop in those who lack it; for the teacher the first step is to become aware of some of the differences in the various patterns - the difference between the rhythm of a hit and that of a throw, of a high jump and a long jump, of a crouch jump and a catspring, and of a leap-frog and a slow through-vault. Few movements, when performed with skill, are uniform in quality throughout; even if they are brief in duration they usually show an increase in range, in speed, and in strength, and then a diminution. For example, leap-frog increases in speed and vigour throughout the run-up and the take-off, the flight seems almost like a pause and then there is a quick conclusion. In hitting there is first the preparatory swing, then an increase in speed and vigour up to the point of impact, after which the effort tails off. Some children find it difficult to knit their efforts into a satisfactory whole (whether in hitting, throwing, climbing or leaping), perhaps because they are jerky, or stiff, or too slow, or too violent; or perhaps because they lack vigour or the power to speed up their efforts. If we can learn to recognize children's difficulties, whether these are shown in the course of physical education or in their movement generally, we shall be on the way to giving them the help that they need.

## THE PLATES

1-13 show some of the kinds of apparatus which have been introduced into primary schools, and which are discussed in Chapter One: there are many other kinds. The photographs also show children using the apparatus in ways which they have invented; some of the things that they have chosen to do are enjoyed and practised by many children, some are too difficult for all but the most skilful and confident.

14-20 show children dancing.

1 Infants using a scramble net which is supported on a fixed tubular metal frame



## 2 Juniors climbing on a

 permanent metal frame
## (right)

3 Juniors in a rural school experimenting on a range of permanently fixed tubular metal bars




5 Fixed metal frames with adjustable rope ladder and plank



7 (a) Horizontal ropes stretched between a fixed metal stand and hooks let into a wall. The ropes are adjustable

7 (b) A small portable metal stand and bar with adjustable planks


7 (c) Small metal frame which should preferably be fixed in permanent sockets

7 (d) Infants using portable metal apparatus which can be adjusted in various ways







12 (a) Portable stands and a pole

12 (b) Apparatus improvised from planks and trestles
12 (d) Ways of using a trestle table



14 (a) Moving to the sound of the gong


14 (b) Each moving to the sound of his own instrument


15 Two boys accompany themselves on a drum


16 Moving slowly and softly




19 A group led by a girl with a gong


| NDIX I MATERIAL FOR PHYSICAL TRAINING |  |  |  |
| :---: | :---: | :---: | :---: |
| This Appendix provides, for those teachers who need it, a nuc for physical training : both teachers and children will, no do ideas given, and evolve their own, thus providing a varied progr will cover the whole primary range. | us of material t, expand the ramme which | LEAP-FROG THROUGH-VAULT | fifty-four |
| COMPENSATORY MOVEMENTS | page | CROUCH JUMPS AND CATSPRINGS | fifty-four |
| LEG MOVEMENTS | thirty-four | ROLLS | fifty-five |
| TRUNK MOVEMENTS | thirty-seven | HANDSTANDS | fifty-six |
| ARM AND SHOULDER GIRDLE MOVEMENTS | fcrty-five | CARTWHEELS | fifty-seven |
| GENERAL ACTIVITIES |  | BALANCING | fifty-seven |
| WALKING AND RUNNING | forty-eight | PULLING, CLIMBING AND SWINGING | fifty-eight |
| SKIPPING | forty-nine | CONTESTS | fifty-eight |
| JUMPING SUPPORTED JUMPS | forty-nine | THROWING; BOUNCING; HITTING; KICKING; HEADING AND AIMING |  |
| SUPPORTED JUMPS | fifty-three | KICKING; HEADING AND AIMING | sixty |
| APPENDIX II | GA |  |  |
| CHASING AND DODGING GAMES | sixty-two | GROUP GAMES | sixty-four |
| RACES | sixty-three |  |  |

## APPENDIX I: MATERIAL FOR PHYSICAL TRAINING

## COMPENSATORY MOVEMENTS

## LEG MOVEMENTS

Walking, running, skipping and jumping are the natural means of developing suppleness and strength in the legs, and for this and other reasons they play an important part in any scheme of physical education for primary school children. Climbing, crawling and balancing are other natural movements in which the legs are strongly used. Kicking, dribbling, passing and trapping a ball are interesting activities for young children, and at the same time they help to develop the skilful use of the legs and feet. In addition to the activities which have been mentioned above it may be considered desirable to include some compensatory movements, particularly for the feet. Many children, even at an early age, use their feet badly, and may even show signs of foot weakness. During recent years the practice has grown up in many primary schools of discarding plimsolls for the whole or part of the physical training lesson so that the feet may be given the maximum freedom of movement. Provided that the floor is clean, smooth, free from splinters, and not too cold, there is much to commend this practice, though it is very desirable that there should be adequate washing facilities for use after the lesson.
The aim of the following movements is to develop strength and suppleness in the muscles and joints of the feet and legs, together with lightness and grace of movement.
A. WALKING (page forty-eight)
B. RUNNING (page forty-eight)
C. SKIPPING (page forty-nine)
D. JUMPING (page forty-nine)

## E. FOOT MOVEMENTS

The following simple foot movements are intended to maintain, or, if necessary, to help to re-establish the full mobility and strength of the feet and ankles. Where possible, they should be performed with bare feet, as the wearing of shoes or plimsolls greatly restricts free movements and thereby reduces their value. The movements should always be taken to their extreme range and done at the child's own speed. Some are performed in a sitting position, but too much reliance should not be placed on their efficacy because the mobility and strength of the feet and ankles which may be apparent when the movement is performed sitting is not always transferred when, as in running and jumping, the body-weight is borne by the feet.

1. Ankle bending and stretching.
2. Foot circling.
3. Foot shaking.
4. Toe bending, stretching and separating.
5. Heel raising and lowering with full ankle movements. (a) One foot at a time. (b) Both feet alternately.
6. Standing, ankle springing. This movement may also be performed so that it gradually changes to skip jumping.
7. Rhythmic jumps. These are performed continuously, the main aim being the development of spring and lightness, rather than practice in working in unison. They should therefore be performed at the child's own speed. Rhythmic jumps may be done on the spot with or without a rebound on landing, with turning, or moving in various directions.
(a) Skip jumps. Light, springy jumps, keeping the feet together, and with a full stretch of the body and legs while in the air. Skip jumping may be combined with leg parting.
(b) Astride jumps. The landing is made with feet astride and together alternately. Astride jumps may be combined with skip jumps.
8. Hopping. Hopping may be performed on the spot, at various speeds, in various directions, and combined with turning.
9. Walking on apparatus. (a) On the rungs of a ladder, gripping with the toes.
(b) Sideways along a narrow bar, pole, or the balance-rib of a bench, gripping with the toes.
(c) Along a pole.
(d) Up an inclined


## F. HIP MOVEMENTS

1. Standing; kicking the hand held at shoulder-height in
various directions $(38,39)$.
This movement may be combined with walking or running.

2. 'Bear walk'
(a) On the floor (41).
(b) Up an inclined bench or plank (40).

3. Lying on the back, with the legs and hips raised vertically and supported by the hands: leg parting.
(a) Forwards and backwards (42).
(b) Outwards and inwards (43).
4. Lying on the back, with the legs and hips raised vertically and supported by the hands: legs circling, keeping both legs together (44).

5. Standing: leg swinging in various directions, with straight or bent knee. These movements should be performed freely, vigorously and continuously, and once the movement has been started the weight of the leg should be used to assist momentum. Some support, preferably at a wall, with either one or both hands will usually be necessary.

(a) Leg swinging forwards and backwards with relaxed knee and foot (45).
(b) Leg swinging forwards and backwards raising the knee as high as possible on the forward swing (46).

(c) Leg swinging sideways and across the body with relaxed knee and foot (47).
(d) Knee swinging sideways across the body (48).
(e) Leg swinging backwards with bent knee, trying to touch the back of the head with the toes (49).

G. COMBINED FOOT, KNEE AND HIP MOVEMENTS
6. Sitting: 'stroking' the leg with the outer side of the opposite foot (51).

7. Kneeling with the hands on the floor: moving one leg in various directions.
The foot or the knee may lead the movement (53).
8. Lying on the back: moving one leg or both legs in the air in various directions (52).
The foot or the knee may lead the movement.

9. Standing: lifting the foot and lowering it slowly so that the toes, ball of the foot and heel make contact with the floor in turn (not illustrated).

10. Holding a bean-bag between the feet: jumping and throwing it in various directions, individually, or in twos one throwing and the other catching. (a) With bent knees (54).

> (b) With straight knees (55).

(c) Backwards and over the head (56).

7. Knee-springing (58).

Bouncing up and down with knees bent, keeping the feet on the floor.
8. 'Crow hop' (59).

Can be taken forwards, sideways, backwards or on the spot, and with or without a partner.
9. 'Duck walk' (60).

Walking forward with small steps in knees full bend position.


59
60

10. Running on all fours, in various directions and at various speeds (61).
11. 'Cat crawl' (62).
12. 'Cat-crawl' up an inclined ladder, with the feet on the rungs (63).
13. Running up an inclined bench or plank, turning and 'crow, hopping down (not illustrated).

62


TRUNK MOVEMENTS
As far as young children are concerned, the provision of opportunities for climbing, swinging, circling and crawling will do much to strengthen the muscles of the trunk and to maintain and improve the suppleness of the spine, though, in addition, it is usual to include in the physical training lesson some compensatory trunk movements, especially where opportunities for climbing are not available. The maximum benefit will probably be obtained when trunk movements are performed as individual practices at the child's own speed.
For the purpose of clarity and simplicity compensatory trunk movements (with the exception of a few movements on benches) are here classified, first, in relation to their direction, and second in relation to their starting position, as follows :

## A. MOVEMENTS FORWARDS OR BACKWARDS

(a) Lying.
(c) Kneeling.
(b) Sitting.
(d) Standing.
B. MOVEMENTS FROM SIDE TO SIDE
(a) Lying.
(c) Standing.
(b) Kneeling.
C. TWISTING MOVEMENTS
(a) Lying.
(c) Standing.
(b) Kneeling.
D. MOVEMENTS IN VARIOUS DIRECTIONS
(a) Lying.
(c) Kneeling.
(b) Sitting.
(d) Standing.
E. MOVEMENT ON BENCHES OR PLANKS
(a) Lying.
(b) Sitting.
A. MOVEMENTS FORWARDS OR BACKWARDS
(a) LYING

1. Lying on the back with the hands clasped, or holding a braid with both hands: ' threading and unthreading the needle ' (64).

2. Lying on the back: hugging one or both knees to the chest (65).

3. Lying on the back, or on one side : curling up as small as possible, and stretching out as far as possible (66).
4. Lying on the back with the knees raised to the chest, or with the legs and hips raised vertically and supported by the hands: ' cycling' (67).


67
5. Lying on the back with the knees bent and the feet on the floor: rolling backward to touch the floor overhead with the knees or toes (68).
6. Lying on the back with the knees bent and a bean-bag held between the feet : rolling backward to place the bean-bag on the floor overhead as far as possible, picking it up with the feet and returning to the starting position (not illustrated).
7. Lying on the back with the arms overhead: rolling backward to touch the hands with the toes (69).
8. Lying on the back: rolling backward to touch the floor overhead with the toes, lightly beating the floor with the toes, or walking the feet towards the shoulders or round body (70).

9. In twos, lying on the back with the arms overhead, both grasping a stick: raising the legs until the toes touch the stick (71).
10. In twos, lying on the back with the arms overhead each grasping the other's wrists: raising both legs to touch partner's toes, or to pass a bean-bag to her (72).
11. Changing between lying on the back and sitting with the knees bent (not illustrated).

12. Lying on the front grasping both feet: rocking forwards and backwards ('Rocking-horse', 73).
13. Lying on the front, holding a bean-bag in one or both hands; raising the trunk from the floor and throwing the bean-bag forwards and upwards or to a partner (74).

14. Lying on the front with the arms overhead: raising the arms and trunk from the floor (75). Later, raising the arms and the legs at the same time.
15. Lying on the front with the hands under the shoulders: raising the head and trunk from the floor and bending the knees until the feet touch the back of the head (76).
(b) SITTING

1. Sitting with the legs crossed grasping both feet: trunk dropping downwards followed by unrolling (77).
2. Sitting with the legs crossed grasping both feet: rolling backwards to touch the floor overhead with the feet (78).


77


76


3. In twos with the hands grasped, one sitting with the knees bent and the feet on the floor, and the other lying on the back with the knees bent and the feet on the floor: rocking forwards and backwards changing between sitting and lying (79).

5. Sitting with one knee bent and the other leg straight: rolling backwards and forwards to stand up or walk forwards (81).
4. Sitting with the knees bent and the feet on the floor: rolling backwards and forwards to stand up (80).

6. Sitting with the knees bent and the feet on the floor: backward roll (82).


81

(c) KNEELING

1. Kneeling with the hands on the floor: hollowing and rounding the back (83).
2. Kneeling with the hands on the floor : raising one knee and lowering the head until the knee and the forehead touch (84).
3. Kneeling with the hands on the floor: bending the head and trunk backwards and raising one leg with the knee bent until the foot touches the back of the head (85).

(d) STANDING
4. Standing with the back against a wall and the feet a little forward; trunk dropping downwards and unrolling (86).
5. Standing with the feet apart: trunk dropping downwards and unrolling (not illustrated).



87
3. In twos: one partner holds a hoop horizontally while the other steps into the hoop and crawls out without touching it (87).

4. 'Caterpillar walk' (88).

B. MOVEMENTS FROM SIDE TO SIDE

(b) KNEELING

Kneeling with the hands on the floor: 'walking' the hands round to the heels, first to one side, then to the other (continuously) (90).
(a) LYING

Lying on the back, or on the front : bending sideways to touch the foot with the hand (89).

## (c) STANDING

Standing with the feet apart: reaching to touch the floor as far sideways as possible (91).
C. TWISTING MOVEMENTS
(a) LYING

1. Lying on the front grasping both feet: rolling from side to side (92).
2. Lying on the back with the knees raised to the chest: hip rolling from side to side to touch the floor with the knee (93).
3. Lying on the back with the arms overhead : rolling sideways without touching the floor with the hands or feet (94).
(b) KNEELING

Kneeling with the hands on the floor: reaching under one arm with the other arm and twisting to lie relaxed on the back (95).

92


94

(c) STANDING

1. Standing with the feet apart: patbouncing a ball in a circle round the feet, using one hand only, twisting to the other side to catch the ball with the opposite hand, and continuing the patbouncing (96).

2. Standing with the feet apart: twisting and reaching to touch the floor as far sideways as possible with the opposite hand (97).
3. Standing with the feet slightly apart: knees bending forwards and trunk twisting to reach as far as possible behind the foot with one or both hands (98).


99
4. In twos, standing a short distance apart back to back: twisting and passing a braid, bean-bag, or short stick (held in both hands) from one to the other. Later, increasing the distance apart (99).
This movement may also be performed from sitting with the legs crossed.

5. Standing with one side towards a wall and with one arm held obliquely upwards with
 the fingers touching the wall: twisting continuously under the arm. Later, lowering the arm gradually, as far as possible (100).

101
D. MOVEMENTS IN WHICH VARIOUS DIRECTIONS ARE COMBINED
(a) LYING

1. Lying on the back with the legs and hips raised vertically and supported by the hands : knees bending towards the chest with hip turning (101).

2. Lying on the back with the feet apart and the arms sideways on the floor: swinging one leg across to touch the floor on the opposite side. Later, to touch the opposite hand with the foot (102).
3. Lying on the back with the legs and hips raised vertically and supported by the hands : swinging the legs from side to side (103).
(b) SITTING
4. Sitting with the legs crossed and grasping the feet: twisting and bending to touch one knee with the opposite ear (not illustrated).
5. Sitting with knees bent, hands grasp-
 ing feet: rolling backwards, then to

6. Kneeling with the hands on the floor: moving one arm or one leg in various directions.
7. Kneeling and sitting on the heels: changing between sitting on the heels and sitting alternately on the left and right sides of the heels.
8. Kneeling with the hands on the floor: walking the hands round to the heels, swinging first one arm and then the other arm upwards and circling overhead to the other side, continuing to walk the hands from the heels to the starting position (105).

(d) STANDING
9. Standing with the feet apart, holding a bean-bag in one or both hands: bending forwards with or without bending the knees to place the bean-bag on the floor in various directions as far away from the feet as possible (106):
(i) Forwards.
(ii) Backwards through the legs.
(iii) Successively in several directions.
10. In twos, standing with the feet apart facing a partner, both holding one end of a stick in each hand: making circles and turning under the sticks (107).
11. Standing with the feet apart and holding a ball in one hand: twisting to bounce the ball between the feet so that it rises to be caught in front of the body (108).
12. In twos, standing facing each other and holding one end of a stick in both hands: stepping over and turning under the stick until the starting position is reached (109).



## E. MOVEMENTS ON BENCHES OR PLANKS

## (a) LYING

1. Lying on the front across a bench or plank: moving the body round to face in the opposite direction (114).
2. Lying along the bench : changing between lying on the front and lying on the back, without using the hands (not illustrated).


115

## (b) SITTING

1. Sitting astride the bench with the feet on the floor: lifting the feet on and off the bench (not illustrated).
2. Sitting with the knees bent and the feet raised just above the bench or plank: spinning the body round to face in the opposite direction, or completely round to face in the same direction (115).
3. In twos, sitting on the bench, facing each other a short distance apart and with the feet on the floor at one side of the bench: lifting the legs over the bench from side to side, each trying to lift them higher than the other (not illustrated).

## ARM AND SHOULDER GIRDLE MOVEMENTS

Movements involving hanging, swinging, climbing, lifting, carrying pulling, pushing, and throwing, are the most natural and probably also the most beneficial arm movements for primary school children. Although the importance of providing some form of fixed or portable apparatus on which children can hang, swing, or climb, has been mentioned elsewhere in this book, it cannot be too strongly emphasized that such apparatus is particularly valuable for the development of strong and supple arms and shoulders.
There are many forms of throwing, hitting, bowling, bouncing and aiming, which provide good arm and shoulder movements, and full use should be made of these activities, particularly when the physical training lesson is taken out of doors.
If opportunities are not available for hanging, swinging and climbing, compensatory arm movements, examples of which are given below, may be used. These should be performed individually at the child's own speed In such movements as arm circling the children may be encouraged to vary the speed of their performance, not only changing the speed of the. complete movement, but also of parts of the movement, e.g. speeding up the forwards-upwards part and slowing down the backwards-downwards part in arm circling.

## A. ARM SWINGING (one arm or both arms)

In all arm swinging movements the arm or arms should be kept straight, but not tense; the hand or hands should be loosely curled, and, when once the movement has been started, the weight of the arm should be used to assist it. The movements should be performed continuously and smoothly without waste of effort.
Arm swinging forwards and upwards is best introduced, wherever possible, from lying on the back with the knees bent and the feet on the floor, because young children often experience difficulty in isolating the movement to the shoulder girdle. Other suitable starting positions for arm swinging are:
(a) kneeling on one knee,
(b) standing with the feet apart.

When performed in the standing position arm swinging may often be effectively combined with trunk or leg movements.

1. Continuous arm swinging forwards - backwards -forwards-upwards, increasing the range of the movement (116).
2. Continuous arm swinging forwards-upwards (not illustrated).
3. One arm upwards: continuous arm changing with a forward swing (117).
B. ARM CIRCLING (one arm or both arms)
In circling, as in swinging, the arm or arms should be kept
 straight but not tense; the hand or hands should be loosely curled and the weight of the arm should be used to help the movement. The circles should be as large as possible, the arms brushing the ears and the sides of the body in passing. The direction of the circling may be forwards-upwards-backwards-downwards, or backwards-upwards-forwards-downwards, or sideways-upwards-downwards across the front of the body.
Suitablestarting positions for arm circling are :
(a) Standing with one
foot forward.
(b) With the feet apart.
(c) Kneeling on one knee.
4. Arm circling in various directions (not illustrated).
5. Both arms swinging forwards - backwards and circling with a jump on the circling movement (118).
6. Both arms circling, one arm coming up as the other arm goes down (119).


7. Both arms circling across the front of the body:
(a) in the same direc-
(b) in opposite direc-
(c) in opposite direc-
tion (120). tions outwards (122).

## C. ARM MOVEMENTS AT A WALL

1. Reaching as high as possible with one or both arms.

Standing facing the wall and reaching as high as possible using first one and then the other arm, or both arms together (not illustrated).
2. Continuous bending and stretching of both arms.
(a) Standing facing the wall, palms flat against the surface and fingers pointing slightly inwards: bending and stretching the arms, allowing the body to lean forwards in a straight line without moving feet (123).


123
(b) Standing as in (a) but with distance from the wall increased ; falling forwards from the ankles, keeping the body straight, until the hands come into contact with the wall, when the elbows are immediately bent. This is followed by a vigorous push-off with the hands to return the body to an upright position (not illustrated).

## D. ARM MOVEMENTS WITH TRUNK AND LEG MOVEMENTS

The arm movements included in A, B and C are mainly of the isolated type, but there are others in which the arm movement derives its impetus from the movement of the body. Vary speeds as in arm circling.

1. Standing with one arm held loosely forwards: trunk and knee bending to brush the floor at the side of the foot with arm swinging back-wards-forwards-upwards (124).
2. Standing with the feet apart: trunk and knee bending to brush the floor alternately outside each foot with one arm circling in a figure-of-eight across the body and reaching high above the head (125).
3. Standing with feet together and arms held loosely forwards : trunk and knee bending to brush the floor at sides of feet with one or both arms swinging backwards -forwards-upwards (126).


4. Standing with the feet together and the arms held loosely forwards: trunk and knee bending to brush the floor at the sides of the feet with one arm or both arms swinging backwards and circling forwards-up-wards-backwards-forwards (127).
5. Standing with the feet apart: dropping the trunk downwards, swinging from side to side with knee bending, gradually increasing the height of the swing, turning the head and trunk and swinging the arms overhead (128).

6. Standing with the feet apart: swinging the arms across the body to shoulder-height on each side, increasing the swing by 'giving' in the hip, knee and ankle joints, so that the hands brush the floor and then swing sideways as high as possible (129).


## E. ARM MOVEMENTS AS A PART OF TRUNK MOVEMENTS

Several of the following have already been listed under Trunk Movements.

1. Reaching with one arm or both arms in various directions from the following starting positions (not illustrated):
(a) Standing with the
(b) Kneeling with the
(c) Sitting.
2. Kneeling with the hands on the floor: walking the hands round to the heels, swinging first one arm and then the other arm upwards and circling overhead to the other side, continuing to walk the hands from the heels to the starting position (105).
3. Standing with the feet wide apart and holding a bean-bag in one hand: trunk bending sideways swinging the opposite arm overhead to drop the bean-bag as far sideways as possible. The bean-bag is then picked up with the same hand, the arm coming across the body (130).
4. Standing with the feet apart: placing a bean-bag as far as possible in various directions:
(a) To the sides.
(b) Backwards through the legs (106).

(c) Forwards (106).
 (131).
5. 'Lifting the $\log$ ' (132).
6. 'Weighing salt.' As in fig. 79, but changing between standing and lying.
G. CLIMBING AND SWINGING
(See General Activities-L.)


## GENERAL ACTIVITIES

These are classified as follows:
A. Walking and run-
G. Crouch jumps and

Catsprings.
H. Rolls.
B. Skipping.
C. Jumping.
D. Supported jumps.
E. Leap-frog.
I. Handstands.
F. Through-vault.

## A. WALKING AND RUNNING

(a) Walking

Short spells of walking, practised freely, may be introduced anywhere in the physical training period, the object being to encourage the development of movement which is economical of energy and free from tension. While there should be no attempt to prescribe a definite form of walking, the teacher will no doubt encourage the children to walk freely and naturally, and will correct, particularly at the junior stage, some of the faults in walking which are to be found even in young children (e.g. walking with the feet turned too much outwards).
The following are variations of walking (not illustrated):

1. With changes of speed (fast, slow, accelerating).
2. With changes of direction (sideways, backwards, etc.).
3. With long or short steps.
4. Walking with the heels raised (long or short steps).
5. Walking on the heels.
6. Walking 'heel and toe'.
(a) Heels, heels, toes, toes.
(b) Heel and toe (emphasizing 'rolling ').
(b) Running

Running lightly and easily on the balls of the feet is a gradual development which does not as a rule take place before the end of the infant stage, though, of course, infants enjoy running freely and vigorously. Even at the junior stage many children seem to find difficulty in achieving the full use of the ankle and the strong push forward from the ball of the rear foot which are essential features of a light, springy action. There are many variations of running suitable for use with children of Primary School age, of which the following are examples (not illustrated):

1. Running, dodging and swerving.
2. In twos: dodging round a hoop or a mat, or catching a partner's ' tail'.
3. Running, dodging and marking.
4. Running on the spot, moving forwards, or round objects, with knee raising (extended ankle).
5. Running, bowling a hoop:
(a) With changes of speed or direction.
(b) Round obstacles.
(c) Alternately bowling the hoop and running round it.
6. Running round a spinning hoop as many times as possible before it falls (133).
7. In twos: each spinning a hoop and running to catch partner's hoop before it falls (134).


133


134

8. Running through a large moving hoop as many times as possible before it falls (135).

9. In twos, each holding a hoop and standing facing each other a short distance apart: reverse spinning (i.e. bowling hoop forward with a back spin) (136) and running to catch partner's hoop before it falls.
10. In twos: running parallel to each other a short distance apart and each bowling a hoop: on the signal changing hoops while continuing the running (not illustrated).

## B. SKIPPING

Skipping may be practised individually, in pairs, or in threes, using a short rope, or with several children skipping at once with a long rope. For the older children the following are suitable variations (not illustrated) :
(a) Using one or more individual ropes

1. In threes: ' Double Dutch ' (two ropes). 2. 'Double throughs.'
2. In twos, standing side by side: each child turning one end of the rope with the outside hand, running and skipping.
3. In threes: the centre one running and skipping, the other two running and turning the rope.
(b) Using a long rope
4. Running under the turning rope. 2. Jumping over the turning rope.
5. Alternately running under and jumping over the turning rope.
6. 'All in before the fifth turn of the rope'; or all in together, skip a stated number of times and then all out together.
(c) Using hoops
7. In standing position.
8. With the knees fully bent.
C. JUMPING (see also page twenty-six)

The following types of jumping are included under the heading of General Activities :
(a) Without apparatus

1. Running leap with the arms swinging overhead and the body arched (137).
2. Running leap, turning in the air (138).
3. Running leap to click the heels in any direction, with straight or bent legs (139) (140).
4. Running leap making a variety of patterns while in the air (not illustrated) (e.g. one or both legs bent or straight; legs lifted forward, backward, or sideways, with various arm movements).


140



10. 'Giant strides ' (145).
11. Jumping the ' widening stream ' (146).


146

(b) Using hoops


1. Running and jumping or bounding over hoops scattered about the floor (not illustrated).
2. In twos: one child bowling a hoop while his partner jumps over it with leg parting (147).
3. Jumping over a spinning hoop as many times as possible before it falls (not illustrated).
4. In twos: one child jumping into a hnop held horizontally by his partner and crawling out without touching the hoop (see 87). May also be performed continuously in a figure-of-eight.
5. Running oblique high jump over a rolling hoop (148).


149

6. In twos: one child does a running jump through a large hoop held vertically by his partner (not illustrated).
7. Jumping with leg parting over a large hoop which has been bowled with a reverse spin, or over a small hoop with the feet together (149).
(c) Using ropes or sticks

1. Running jumps over ropes or sticks (singly or in a series-not illustrated).
2. Bounding over low obstacles (singly or in a series, 150).
3. Standing jump over a rope or stick (not illustrated).
 illustrated).
. Running ' fence and ditch ' jump (152).
4. Oblique high jump (153).


5. Standing behind the apparatus: placing one foot on it and jumping over it, with or without turning (160).
6. Running along the apparatus with a high leap off the end, with or without arms swinging overhead and body arching backwards (161).
7. As 5 , but jumping over a low obstacle (e.g.a wastepaper-basket, or skittle) placed on the floor or on the apparatus (not illustrated).

8. Running up an inclined bench or plank with a high leap off the end, or over a rope, or combined with a forward roll on landing (162).
9. Running obliquely up three benches or planks arranged as 'steps' and jumping off sideways (163).


163

## D. SUPPORTED JUMPS

For supported jumps the children work in twos and threes and grasp each other's arms as shown in Figs. 164 and 165. A running jump over a rolling hoop or low obstacle requires skilful co-operation on the part of the supporters, who must be particularly careful not to hinder the jumper.
The following are examples of this type of jump:

1. In threes: upward jump (164).
2. In twos: upward jump, with or without leg parting (165).


3. In threes : running jump over a rolling hoop or other low obstacle (166).
4. In twos: running and jumping on to the apparatus followed by an upward jump off, with or without turning (167).
E. LEAP-FROG (see also page twenty-seven)

Supported upward jump with leg parting is a useful preliminary practice for leap-frog; the children work in pairs and the jumper performs the jump with or without a run. Later, the jump may be performed without support, one boy making a ' back' and the other performing the jump with a run and with his hands on the 'back'.
For leap-frog the ' back' should stand either with his feet apart and his side towards the performer or with one foot forward and his back towards the performer. The height of the 'back' should be regulated according to the skill and height of the performer.
Supporters should be prepared to adjust themselves quickly and so give adequate support without impeding the performer in any way during the vault.
The vault over the ' back' is made by the performer after a short run and a take-off from both feet. If sufficient forward momentum has been gained in the run the hands will remain on the ' back' for a moment only and the thrust will be directly downward without upsetting the balance.

## F. THROUGH-VAULT (see also page twenty-nine)

The children work in threes: two, with feet astride, stand side by side about shoulder-width apart and hold a braid or short stick between them. It is important that these two children should be of approximately equal height and that they should hold the braid or stick loosely, preferably with the palms facing forward, so that even a light touch will easily release it. The performer, after a short run and a take-off from both feet, places his hands on the supporters' shoulders, lifts his knees and, aided by a quick, strong, downward pressure of his hands, vaults over the obstacle. This may also be done slowly.
An alternative method of support is for the two supporters to sit on a bench, or form.

## G. CROUCH JUMPS AND CATSPRINGS (see also page thirty)

The starting position both for a crouch jump and a catspring is with the knees fully bent. In a crouch jump the hands are placed on the floor, a strong push is made from the feet so that the body-weight is transferred to the hands and arms, and the hips are raised as high as possible. In a catspring the push from the feet takes place before the hands are placed on the floor and an effort is made to cover as much distance as possible in a forward direction before the body-weight is transferred to the hands and arms. It is, in fact, a quick ' pounce' forwards from the feet on to the hands.


The following are examples of crouch jumps and catsprings:

1. Crouch jump on the spot, or moving forwards or sideways (168).
2. Crouch jump over a rope or stick, through a hoop, or up an inclined plank (169).

3. Catspring over various objects (170). (4-8 (e) are not illustrated.)
4. In twos: one child holds a hoop horizontally for his partner to jump into. The hoop is then held vertically for a catspring through.
5. In twos : one child bowls a hoop slowly and his partner does a catspring through it while it is moving.
6. Crouch jump or catspring followed by a forward roll.
7. In twos: one child kneels with his hands on the floor while his partner does crouch jumps from side to side over his back.
8. Crouch jumps on or over a bench or plank:
(a) Moving forwards with hands and feet on the apparatus.
(b) As (a), but with a catspring off the end, or relaxing into a roll.
(c) Moving forwards doing crouch jumps on and off the apparatus.
(d) Standing with feet astride the apparatus and the hands on the apparatus: crouch jump moving forwards clicking the heels in the air. (e) Crouch jump up and down an inclined bench or plank.
$(f)$ Crouch jump from side to side over a bench or plank or over two parallel benches or planks (171).


(g) Standing with the feet astride the bench:
catspring moving forwards along the apparatus (172).
9. Catspring along the apparatus (not illustrated).

## H. ROLLS (see also page twenty-nine)

It is usually necessary to have a mat when performing a roll; small (individual) mats are generally sufficient, but if a forward roll is preceded by a run or dive a larger and thicker mat should be used. Rolls may be performed in a forward or backward direction and, as proficiency increases, the movements should become more continuous. Forward rolls seem to come easily to most children, but some will require help at first, and many children will require help with backward rolls in the early stages.

1. Rolling round a large mat (173).
2. Forward roll (not illustrated).


3. Running forward roll with a take-off from both feet (174).
4. Standing with the knees fully bent and the arms forward: forward roll.
5. Two or more consecutive forward rolls (4 and 5 are not illustrated).


6. Sitting with the knees bent and the hands above the shoulders with the palms facing upwards: backward roll with the knees bent (177).
7. As in 8, but rolling backwards to stand upright.
8. Backward roll from crouch or standing.
9. Forward roll followed by backward roll (9-11 are not illustrated).

## I. HANDSTANDS

In handstands the body weight is supported on the hands and arms. The hands are placed on the floor (or mat) shoulder-width apart and with the fingers pointing directly forwards. The body should be fully stretched, with the legs together and the knees and ankles straight, and the head should be pressed well back. In the initial stages the children may possibly work in threes or fours, one performing the movement and the others supporting him. As proficiency increases, the children may practise with or without support, according to individual needs. It is important that in returning to the standing position the legs should be lowered slowly and quietly, one after the other.

1. 'Kicking horses ' (178).
2. Handstand with support : (a) in twos (179) ; (b) against a wall (180).
3. In twos: ‘Tipping the wheelbarrow ' (175).


4. In twos: crouch jump or handstand with the hips supported (181).
5. In twos: crouch jump with the hips supported, stretching the knees to handstand (not illustrated).
6. Handstand : relax into forward roll along a mat (182).
7. Handwalking, with or without support (not illustrated).


## K. BALANCING

(a) On the floor (1, 4, 5, 7 and 8 are not tllustrated).

1. 'Stepping-stones', using bricks, tins, hoops, or chalk-circles.
2. 'Duck walking' (60).
3. 'Crow hopping' (59).
4. Running, stopping suddenly standing on the toes or on one foot.
5. Standing on one foot: bending down to touch floor; standing up again.
6. 'Threading and unthreading the needle ' (185).
7. Standing on one foot: hug the knee, or touch the forehead with the knee.
8. Running: at a signal join hands in lines of threes and 'crow hop' over a marked space.


186
9. 'Cock-fighting' (186).
10. Tug-of-war with elbows linked (187).
(b) On apparatus (5-8, 11-13 are not illustrated).

1. Walking or running along the appara-tus-forwards, backwards, sideways, or with turning (188).
2. Stepping through a large hoop or several held vertically or horizontally at various heights (189).

3. Stepping over, or crawling under, several low obstacles (e.g. canes, placed or held at varying heights across the apparatus).
4. Bouncing and catching a ball on alternate sides of the apparatus.
5. Throwing and catching a ball.
6. Walking forwards, backwards, or sideways, throwing a ball to a partner.
7. Rolling a ball along the apparatus.
8. 'Cat-crawling' or 'duck-walking' along the apparatus.


9. In twos: standing at opposite ends of the apparatus, walking towards and passing each other (190).
10. In twos: one child walking along the apparatus and crawling through the legs of her partner who is standing sideways on the apparatus (191).
11. Changing between standing and lying on the apparatus.
12. Walking up and down an inclined bench or plank, or along 'see-saw' benches, or on an inclined ladder.
13. Free running on the floor: at a signal ' fill up the apparatus'.

## L. PULLING, CLIMBING AND SWINGING

Climbing, travelling, twisting and circling will only be possible when suitable apparatus is available. Various simple pulling movements may, however, be used if a smooth bench or plank is available, e.g. pulling along the bench.
 the end placing the hands on a mat and relaxing into a forward roll along the mat (192).

4. Sitting on a horizontal or inclined bench : crawling between the top and the balance-rib and returning to sit on the bench without touching the floor (193).
5. Twisting in and out of the rungs of an inclined ladder (not illustrated).

## M. CONTESTS

Children at the top of the junior school enjoy contests of the pushing, pulling and lifting types. In contests it is important that the opponents should be equally matched and that every child should take part.


Short spells of pushing, pulling and lifting are better than longsustained efforts, especially for children of junior school age.

3. Tug-of-war with the knees fully bent (195).
4. Four-cornered tug-ofwar (196).
5. Line tug-of-war (197).
6. 'Poison' (198).
7. 'Turning the turtle ' (199).



201


202
10. 'Chinese boxing' (202).
11. Pushing contest (203).
 203

204

12. Arm-lock wrestle (204).

13. Stick wrestle (205).
N. THROWING ; BOUNCING ; HITTING ; KICKING ; HEADING AND AIMING
(a) Throwing

1. Throwing a ball into the air and catching with one or two hands.
2. Throwing for length and height.
3. Throwing into the air, bouncing and catching with one or two hands.
4. In twos: throwing and catching with one or two hands (underarm and overarm).
5. In twos: each with a ball, throwing across to partner.
6. Dropping the ball and catching it before it reaches the floor.
7. Throwing high and jumping high to catch the ball.
8. Passing in twos, threes or fours.
9. Intercepting in threes.
10. Juggling with two or more balls, or trick throwing.
11. Throwing with the feet to catch the ball in front or behind the body.
12. In small groups: fielding practice for cricket or rounders (including fielding balls on the run, and balls hit with a bat).
13. In fours: three-quarter passing (the first boy kicks a rugby football along the ground to the second boy, who 'gathers' it and passes it to the third boy; he passes it to the fourth boy, who runs to the first place, and all then move on one place).
14. Keeping the ball moving.
15. In twos, passing a rugby ball to a partner who is moving at speed.
16. Wandering ball.

## (b) Bouncing

1. Bouncing and catching with one or two hands.
2. In twos: bouncing the ball across to partner.
3. In twos: alternately throwing and bouncing the ball across to partner.
4. Bouncing the ball hard, running across a marked space and returning in time to catch the ball before it stops bouncing.
(c) Hitting
5. Pat-bouncing, using the hand or a small bat.
6. Batting the ball into the air and taking it on the bounce.
7. Keeping the ball moving in the air by hitting it with the hand or with a small bat.
8. In twos: pat-bouncing across to partner.
9. In twos: batting the ball across to partner and taking it on the bounce.
10. Crow-hopping with low pat-bouncing, skip jumping with high patbouncing.
11. In twos: one child pat-bouncing the ball, while his partner tries to gain possession of it; if he succeeds, he continues the pat-bouncing, and so on.
12. In twos: volleying practice.
13. In twos or small groups: batting or volleying the ball over a low rope or net.
14. Hitting or batting, for distance or direction, using a rounders-stick, stoolball-bat, or cricket-bat.
15. In fives: batting practice for cricket, changing round after a given number of hits or number of balls bowled.
16. Dribbling a ball with a stick.
17. Running and passing, using a stick and ball.
(d) Kicking
18. Dribbling.
19. Passing and shooting.
20. Running and passing.
21. Kicking for distance or direction.
22. Trapping.
23. Kicking and catching a rugby ball.
(e) Heading

In ones, twos, or very small groups.
( $f$ ) Aiming

1. Rolling a ball between skittles, or at a target.
2. Aiming at skittles, at a wall-target, or through a hoop.
3. In twos: aiming to bounce a ball in a circle chalked on the floor.
4. Drop throws on to floor targets.
5. In twos or threes: aiming to hit a moving partner below the knee.
6. Goal-shooting practices for football, shinty or hockey.
7. Bowling practices for cricket, rounders and stoolball.
8. In threes: practice for bowler, back-stop and first base.
(g) Play against a wall
9. Throwing and catching (underarm and overarm).
10. Throwing against the wall so that the ball bounces off at an angle and running to catch it.
11. Batting the ball with the hand or a small bat.
12. Throwing the ball so that it bounces on the floor before it hits the wall, and catching it.
13. Volleying, using the hand or a small bat.
14. 'Five stones.'

An individual game providing practice in throwing, catching and fielding. Apparatus: A tennis or sponge-rubber ball, five small rounded stone pebbles (arranged thus :-:), and the angle made by a wall rising from a hard, flat surface.
Description: The player stands, at a distance of from 4 to 9 feet from the stones, according to his strength and ability. The ball is thrown at the stones in such a manner as to hit one of them, then the wall, and then to come upwards off the wall to be caught, if possible. As long as the ball continues to be caught after each throw the player can still score, but failure to catch it ends the turn. For hitting one of the corner stones and catching the ball five points are scored; for hitting the centre stone ten. Played individually, the object is to make the highest score without dropping a catch. If all the stones are moved, and each need only be moved once, they are then replaced and the player continues to score. There is, therefore, no end to the possible score. The game may also be played by two players each throwing in turn until a catch is dropped.
7. Heading the ball. 9. Bowling practice.
8. Kicking the ball.
10. In twos: ' tennis' practice.
(h) Throwing, catching and spinning quoits

1. In ones or twos: throwing, catching or spinning a quoit.
2. In twos: throwing over a rope.
3. In twos: one child throwing the quoit and his partner trying to catch it on a stick.
4. Hoop-la (quoits and skittles).

## APPENDIX II: GAMES

## CHASING AND DODGING GAMES

NOTES. These may be individual in type, e.g. Free Tag; there may be an element of co-operation as in Free and Caught, or considerable collaboration as in the skilful playing of French and English.

## 1. Free Tag

One or more players are chosen to chase the others. If a player is touched he becomes ' He ' and the game continues without a pause.

## 2. Couple Tag

The 'He's' chase in couples with inside hands joined. When either touches a player he becomes free, and the player who is touched takes his place. In a variation called Lincoln Tag the players who are touched join up to make other tagging pairs instead of changing with the 'He's'. The game finishes when there are no longer any single runners left.

## 3. Free and Caught

Two or more 'He's' are chosen and the remainder of the players scatter. The 'He's' touch as many as they can. Immediately a player is touched he must stand still, but can be released to take part in the game again by a touch from a free player. The object of the game is for the 'He's' to get everyone standing still, while all the free players try to prevent this from happening.

## 4. All-in Tag

The game is a variation of ordinary Tag. The ' He ' wears a coloured braid and touches as many as he can. When touched a player puts on a braid and helps to catch.

## 5. Ball Tag

The players are divided into groups of six or seven, one in each group being chosen as Dodger. Each group is given a ball, and the players hit the Dodger with the ball.

## 6. Circle Chase

The players form up round a circle at wide and equal intervals all facing in the same direction. At the signal they run round outside the circle, each player attempting to touch the one immediately in front of
him. Immediately a player is touched he falls out. The aim is for the player to put out as many others as possible without being touched himself.
Variation. While the players are running a whistle may be blown; at this signal they turn about and chase in the opposite direction.

## 7. Tail Tag

Each player wears a coloured braid as a 'tail'. At the signal each player tries to collect as many tails as possible, and at the same time attempts to retain his own.
Variation: (a) Catch your Partner's Tail. (b) Team Tail Tag. The same game can be played with one team against three teams, or two teams against two.
8. One against Three

Three players join hands and form a triangle, a fourth player stands outside facing the player opposite, and by dodging tries to touch him. The triangle must not be broken. All players should have a turn as catcher.
9. Chinese Wall, or ' Hill, dill, come over the hill' (206)


$$
\left\lvert\, \begin{array}{ll}
x & \\
x & \\
x & \\
x & \\
x & \\
x & \\
x & \\
x & \\
x & \\
x & 206
\end{array}\right.
$$

For Chinese Wall two parallel lines, 10 feet apart, are drawn across the centre of the ground to represent the wall. One or more players stand on the wall to defend it. The other players try to cross the wall without being touched by the defenders. Those touched join the defenders on the wall.
Variation. A variation of the game can be played by the runners counting the number of times they can get to and from the boundaries.

## 10. French and English (207)



Apparatus. From 12-20 tokens (bean-bags, skittles, flags, etc.).
The ground is divided into equal halves by a central line, and a baseline running parallel to this is drawn across each end. The tokens are divided and laid out at equal distances behind the base-lines. The players divide into two teams which form up along their own baselines. When the game is started, players attempt to traverse their opponents' territory and cross their base-line without being touched. Any player who succeeds in doing this carries back one enemy token which he places behind his own base-line. A successful player may not be touched on his return journey.
If a player is touched while in his opponents' half of the ground he becomes a prisoner and must remain behind his opponents' base-line until a player of his own side succeeds in crossing the base-line and thus freeing him. Both players are then granted a safe passage back to their own territory.
When a player is touched his captors must accompany him back to the base-line. When a captive is freed both he and the player who freed him must return to their own side of the central line before again engaging in the game.
The winning team is the team which captures the whole of the tokens, or the game may be decided on points, one point being awarded for a prisoner and two for a token.

## RACES

A race is essentially a test of speed or skill over a clearly defined course. As it is in the nature of a test it should only be undertaken when a standard of skill has been reached which makes the test worth while. Races should be selected in which turns come frequently and in which every child gets an adequate amount of practice and opportunity for improving his skill.

The teacher should encourage the children to get a quick start, to go ' all out ', and to be ready and controlled in 'touching off' or handing on apparatus, etc.
Care should be taken to ensure that the teams are equal, that all races are started fairly, and that the results are given clearly and with strict impartiality. Various arrangements may be adopted to suit different conditions. The following are the three chief types:
(a) All against All. Players race over a given distance to see who can cross the finishing line first. If the numbers are too large to permit all to race at once, half can run at a time, either straight across the pitch or to touch a partner on the opposite side and back to the starting line.
(b) All-in Race. Players are grouped in files of four to eight. The teams run over the same course one after the other following the leader; the winning team is the one which completes the course in the quickest time.
(c) File Relay Races. The file relay race is easily organized and is a convenient game to play when space is limited. It is, however, a very restrictive form of game and for this reason should not be over-used. One player in each team runs at a time, the next starting as soon as the first has completed the course, and so on until all have run. The winning team is the one which gets all its members over the finishing line first. It is advisable to have small teams, of four or six in each. These three types of race can take any of the following forms:
(1) Running.
(2) Walking.
(3) Hopping (short distance only).
(4) Crawling on all fours (forwards or sideways).
(5) Skipping.
(6) Bowling a hoop.

1. Scoring Runs (208)


Players toe a line and on a given signal spring to see who can first touch the opposite line, or score as many runs as possible.

## 2. Races using Balls

All against All.
(a) Running, bouncing and catching.
(b) Running, catching and throwing.
(c) Running, pat-bouncing.
(d) Dribbling the ball with the foot or with a stick.
(e) Running and batting the ball in the air with the palm of the hand.
3. Running and Bouncing Relay (209)


Apparatus. One tennis ball for each team.
Teams line up in files behind the starting line A. No. 1 circles round the back of his own team, runs forward bouncing the ball once while running at top speed between A and B . He gathers the ball, bounces it in the circle marked C and races back towards A, passing the ball as he runs with a long forward bounce to No. 2, who starts immediately he receives the ball, while No. 1 takes his place at the back of the line.
4. Flag Race (210)


Players line up behind the starting line A.
No. 1 circles round the back of his own file, runs forward to touch off at $B$, returns and hands on a flag or baton to No. 2, who follows the
same course. Meanwhile No. 1 falls in at the back of the file. The team wins whose last runner first crosses line A.
5. Running Tunnel Ball Relay-whole team moving (211)



The teams stand with legs apart making a tunnel, and roll a ball down between the legs until it reaches the last player. On receiving it he runs up to line B, and as he runs his team follow him immediately and fall in behind him at the other end, all facing line A. The team will have moved on one place after each run, and the race continues until the team is back in the order in which it first started.

## GROUP GAMES

## 1. Free Dodge Ball

This is played similarly to All-in Tag (see page sixty-two). When a player is hit by the ball, he puts on a coloured braid and helps the ' He '.
2. Dodge and Mark

Players arrange themselves in pairs, one the Dodger and the other the Marker. At a given signal the Dodgers try to get free, and the Markers follow them closely, trying to keep within an arm's distance so that when the whistle blows they can touch their opponents.
3. Keep the Ball Moving

The players arrange themselves in small groups with a ball to each group. On a given signal they move about passing the ball from one to another as speedily as they can.
4. Dodge Ball in Threes

Players arrange themselves in groups of three with one in the middle. The outside players try to hit the middle player, who dodges and jumps to avoid being hit.

## 5. Team Passing

(a) In twos. Players choose partners; one starts with the ball and tries to make the greatest number of passes with his partner; meanwhile the other couple try to intercept and, if successful, begin passing between each other in the same way.
(b) Passing in small teams of three to six players; the intercepting team tries to mark one of the opposing team until they themselves intercept and secure the ball; they then continue passing among their own side.

## 6. Intercepting in Threes

Sometimes called Pig in the Middle.
Children arrange themselves in threes with one in the middle. The two outside ones pass the ball from one to the other and the inside one tries to intercept it. If the middle one secures the ball he changes with the player who threw it. Provided space allows the children can run freely and dodge anywhere.
7. 'Stand-O'

A game for groups of up to about twelve or fifteen. It is a throwing and catching game in which the object is to lose as few 'lives' as possible.
Apparatus. One tennis ball.
Method of Play. The game is started by one player throwing the ball high into the air and calling a name or number. If the players are known to one another their names may be used, otherwise they are numbered in sequence. The player named must run to gather the ball as quickly as possible; the remainder scatter. With the ball firmly in hand the centre player calls 'Stand-O', when all must stop and stand quite still. The ball is now thrown at any player who presents an easy target; this player may not dodge in any way, though he may catch the ball. If he is missed, the thrower loses a 'life'; if he is hit, he himself loses a 'life ', if he catches the ball the thrower loses. Whoever loses is responsible for throwing up the ball again in the centre, calling some other name, and the game continues until some player has lost three 'lives'. He can then be made to perform some penalty or forfeit suitable to the occasion.
There are some elementary tactics involved. It is obviously wise to catch the ball, if possible, when a hit is certain, but it may be better not to attempt to catch the ball when it is passing, for a dropped
catch is another way of losing a ' life' since it must obviously count as a hit. In scattering it is unwise to run too far, for the most distant player is the obvious one to designate.
There is no danger of injury, for the catching clause suggests that the ball is best thrown at the legs or on the low side. Played at speed and without wasted time, this is quite an active game for all concerned; care needs to be taken that all are called at one time or another, though it is legitimate to look for victims who have lost 'lives '.
8. Moving Target (212)


## 212

Apparatus. A football as target and a tennis ball for every player.
Ground. (a) For four teams. A square the size of which will vary with the number of players and their ability in throwing.
(b) For two teams. A circle divided into two courts by a centre line. An area approximately 30-40 feet across is appropriate for children.
Method of Play. When the game is played by four teams each team takes up a position along one side of the square. A football is placed in the middle position of the square and the tennis balls are divided amongst the teams. At a signal each team attempts to drive the football over the opponents' lines by hitting it with the tennis balls. As soon as the football crosses a line points are awarded to the opposing teams; the tennis balls are then redistributed and the football is replaced in the middle.
Balls which lodge inside the square or pass outside it may be recovered so long as the game is not interfered with. The football must not be touched with the hands or feet.
When the contest is between two teams only each team stands outside the circle with the players arranged at intervals round the semicircle which they are defending. The game is played similarly to the game for four teams. The game can be played indoors, when the players stand behind two lines at each end of the room.
9. Bombardment (213)

| 8 | 8 | 0 |  | 0 | $x$ |  | $x$ | 8 | 8 | 8 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 8 | 8 | 8 |  | 0 |  |  | $x$ |  | 8 | 8 |  |
| 8 | 8 | 8 | 0 |  | 0 | $x$ |  | $x$ | 8 | 8 | 8 |
| 8 | 8 | 8 |  | 0 |  |  | $x$ |  | 8 | 8 |  |
| 8 | 8 | 0 |  | 0 | $x$ |  | $x$ | 8 | 8 | 8 |  |

213
Apparatus. Small footballs or large rubber balls or tennis balls; a number of targets such as skittles or indian clubs.
Method of Play. The targets are set up at each end of the ground. The opposing teams each occupy one half of the ground. Some players are chosen as defenders to guard the targets; the remainder, the attackers, place themselves along the centre line. The balls are distributed and at the signal the attackers throw the balls and attempt to knock down their opponents' targets. The defenders try to intercept the balls and feed their attackers. A target which is knocked down may not be replaced. When ' time ' is called the team with the largest number of targets standing wins the game.

## 10. Post Ball (214)



## 214

Two targets (tins, posts, stumps, jumping-stands, skittles, etc.) are set up, one at each end of the space. Each is surrounded by a small circle (3 feet radius).
Method of Play. The players divide into two teams. One player of each team is appointed to defend the target from outside the circle. The remaining players arrange themselves so that each marks an opponent.
The aim is to hit the opponents' target. One point is scored for each hit and the winning team is the one securing the greatest number of points in a given time. Shots at the target may be made from any position outside the circles.

## Rules

(a) The game is started by a bounce or throw between two opposing players in the middle of the space.
(b) No player may run with the ball or hold it for more than three seconds.
(c) Rough play should be penalized.
(d) If two players hold the ball at the same time it should be thrown up or bounced between them.
(e) In the case of a 'foul ' a free throw is given to the opposite team.
$(f)$ Any player entering the circle should be penalized.
11. Skittle Ball (215)


The game is played on similar lines to Post Ball except that the players must remain in their own half of the ground.
12. Three Court Dodge Ball (216)

| $z$ | $z$ | 0 | 0 | $x$ | $x$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $z$ |  |  | 0 |  |  |
| $z$ | $x$ | $z$ | 0 | 0 | $x$ |  |
|  | $z$ |  |  | 0 |  |  |
| $z$ | $x$ |  |  |  |  |  |
| $z$ | $z$ | 0 | 0 | $x$ |  | $x$ |

216
Apparatus. A football or other large ball.
Method of Play. The players divide into three teams, each occupying a section of the ground. The object of the game is for the players in the two end courts to throw the ball and hit the players in the middie court, while the players in the middle court try to dodge the ball. A point is scored when the ball hits a player below the knee. The three teams occupy the middle court in turn for a specified time. The team against which the lowest number of hits is scored is the winning team. The end teams should co-operate with each other in order to
secure hits. No hit may be scored if the thrower has one or both feet over the line.
13. Two Court Dodge Ball (217)

| $x$ |  | $x$ | $x$ | 0 |  | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $x$ | $x$ |  |  | 0 |  |  |
| $x$ |  | $x$ | $x$ |  | 0 |  |
|  | $x$ |  |  | 0 |  | 0 |
|  |  | $x$ | $x$ |  | 0 |  |

217
Apparatus. Football or other large ball.
Method of Play. The players divide into two teams, each occupying a court. The game is started by the ball being thrown in from the side-line so that it bounces in the centre of the ground. When the ball has been secured by one player he throws it at an opponent below the knee. A player can save himself by catching the ball. If hit, the player goes behind the opposite back-line and becomes a 'thrower' only, but the game becomes more exciting as hits can then be made from behind as well as in front. Passes can be intercepted. When a ball passes out of court over a back-line a player recovers it, passes it to one of his own side, and the game continues. When the ball passes out of court over a side-line a player recovers it and throws it to one of his own side.

## 14. Hurly Burly (218)

In many areas when children first visit the playing fields there is a need for an exhilarating running game with few regulations. Hurly Burly provides an informal game playable on any open space and for which rules can be made to suit the circumstances.

|  |  | 0 | 0 | $x$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0 | 0 | 0 | 0 | $x$ | $x$ | $x$ |  |
|  | 0 | 0 | 0 | $x$ | $x$ | $x$ | $x$ |

Apparatus. A small football. Improvised goal or goal-line

Size of Pitch. Young children should play on small pitches not more than 60 yards by 30 yards.
Method of Play. The players divide into two teams and arrange themselves in their own half of the ground.
Goals are clearly marked by posts, chairs, stumps or chalk lines. Goal-, side- and half-way lines can be added as the need arises.
The aim of each team is to get the ball through their opponents' goal or over their goal-line. The players are free to propel the ball as they like, provided there is no pushing or rough play. They may kick, bat with the open hand, throw, head or fist the ball from one to the other, run with, bounce or dribble it along with foot or hand. Players must pass when touched when holding the ball. The players will quickly grasp that the game is a passing one in which the ball should move about the field from one player to another.
Number of Players. The team may consist of from 7-10 a side.
An alternative method of scoring is to arrange a goal-line, indicated by definite posts or bases, over which the children must run, kick or throw the ball. If the width of the ground is taken it tends to spread the game over the whole field, enabling more players to score.

## 15. Circle Bounce Ball

Apparatus. A tennis ball for each group of players.
Method of Play. The players are divided into groups of four and a circle about 3-4 feet in diameter is chalked out for each group of players. The game consists of pat-bouncing the ball into the circle from one player to another, the players trying to make as many continuous bounces as possible without actually catching the ball. The ball must be hit on the first bounce and, to be a 'good ' return, must bounce within the circle.
Variation. When some skill has been acquired two players in each group may play against the other two. Each side plays the ball alternately, the aim being to make it difficult for the opponents to return the ball into the circle. This may be done by giving strong slanting shots which in bouncing go far outside the circle, or by varying the strength of the bounce so that the ball rises at different heights from the ground.
Players must be ready to move aside to allow their opponents to return the ball; any obstruction is counted a 'let '.
Failure to return the ball into the circle scores a point to the opposing team.

## 16. Circular or Passing Rounders (219)



219
Apparatus. A small football or ball.
The game is an adaptation of Rounders suitable for playgrounds and indoor conditions when playing fields are unavailable. The distance between the posts should be adjusted to suit the throwing powers of the players.
Method of Play. Players divide into two teams, the batting team lining up behind the home base-line, the other team taking up positions in the field.
The batsman after hitting the ball tries to complete a rounder and cross the base-line before the fielders can secure the ball and pass it to the three basemen and bowler in turn. If the runner is successful a point is scored to the batting team, otherwise there is no score. Each team bats in turn and the one securing the greatest number of points is the winner.

## 17. Arch Ball Rounders

The game is similar to the above except that, after the ball is hit and fielded, the fielding side fall in quickly behind the player securing the ball and pass it overhead, down the line, to the last player in the team. The batting team scores a point if the runner can cross the baseline before the ball reaches the hands of the last player of the fielding team.
18. Quoit Tennis (220)

Apparatus. A rope or rubber quoit, a pair of jumping-stands or other uprights with a rope stretched across at a height of 4-5 feet to serve as a net.


220
Ground. A miniature singles tennis-court is marked out as in the diagram. The dimensions will vary with the skill of the players, but a court approximately 25 feet by 15 feet is suitable for children of average ability.
Description. The game may be played by two or four players.
A player serves from behind the back-line and the throw must be made by an underarm or horizontal action of the wrist and elbow. The arm may not be raised above the shoulder at any time during the service or throw. The quoit must pass over the rope into the service court diagonally opposite. When serving no 'faults' are allowed. If the quoit touches the net and drops over, the service is taken again. The scoring is similar to that in lawn tennis, or a simpler method may be used, and the general features of the two games are alike except where already specified.

## Rules

(1) In catching the quoit, the right or left hand may be used but not the two together. A clean catch must be made, i.e. no part of the body may be used to assist in holding the quoit.
(2) Either hand may be used in throwing, the 'return' is made from the place at which the quoit is caught.
(3) If the quoit is not caught, or is thrown under the rope or outside the court, a point is awarded to the opposite side.
19. Bounce Hand Ball (221)

A running team game in which the ball is bounced and caught.
Apparatus. A football, size 2, 3 or 4 , according to the age of the children.
Ground. Small football and hockey pitches are suitable and the goalposts erected for these games can be used.
A pitch 60 yards by 30 yards is suitable for young children.
Method of Play. The game is played on hockey or football lines

|  |  |  | $x$ | 0 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $x$ | $x$ | $x$ | 0 | 0 |  |  |
| $x$ | $x$ | $x$ | $x$ | 0 | 0 |  |
|  |  | $x$ | $x$ | 0 | 0 |  |
|  |  |  | $x$ | 0 |  |  |
|  |  |  |  |  |  |  |

221
except that the ball is bounced and thrown by hand. The aim is to score goals by throwing the ball between the goalposts. Players may run carrying the ball forward with them but must bounce it every third step.
Rules
(1) A player must always pass if ' touched ' by an opponent.
(2) The ball may be knocked out of an opponent's grasp with the palm of the hand.
(3) Rough play and turning on the ball should be penalized. Children should be taught to avoid obstruction by facing their opponents,
(4) A ball caught by two players at the same time should be thrown up between them.
(5) When the ball crosses the side-line a player of the opposite team throws in from the point where the ball crossed the line; all other players stand 5 yards away.
(6) A ball crossing the goal-line after being touched by an attacker is thrown in by the goalkeeper from a fixed point on the goal-line. When the ball is last touched by a defender a corner throw should be taken by an attacker on the lines of the corner hit in hockey or kick in football. If the ground is not suitably marked out a less formal method of throwing in can be adopted.
20. Touch and Pass and Rugby Touch (222)

| $x$ | $x$ | $x$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $x$ | $x$ | $x$ |  |  |  |
| $x$ |  | $x$ |  |  |  |
| $x$ | $x$ | $x$ |  | 0 0 0 <br> 0  0 <br> 0  0 | 0 |
| 0 | 0 | 0 |  |  |  |

## Apparatus. Association or Rugby football.

Ground. A rectangular space to be marked out with white lines.
Length, 70-80 yards. Width, 35-40 yards.
The goal-line is the whole length of the back-line. Lines are drawn across the ground 10 yards from each goal-line.
Side flags or intermittent lines mark a space 5 yards in width across the centre of the ground.
Arrangements of Players. For eleven a side: four forwards, two halfbacks, four backs, and goalkeeper or line-guard.
The forwards line up across the field on each side of the 5 yards space. The backs stand a little in front of the 10 yards area. The half-backs are on either side of the field midway between the forwards and backs. The goalkeeper stands in front of the goal-line.
Method of Play. The object of the game is to break through the opposing defence and to score a goal by carrying the ball across their goal-line without being 'touched' by one of their team.
The game is begun by a pass taken by the team which did not have the choice of ends; after a goal is scored the pass is taken by the team against which the goal has been scored.
When in possession of the ball a player should run with it and try to make as much ground as possible, but should be ready to pass and not risk a ' touch ' if another player of his team is better placed for opening up the game or scoring.
A 'touch' is a tap on the player with the ball, not a push, charge or tackle. No player may ' touch ' an opponent who has not got the ball.
Rules
(a) Passing may be in any direction except in the 10 yards area, when all passes made by the attacking team must be backwards. In Rugby Touch no forward passes are allowed in any part of the field.
(b) A player must pass immediately he is touched by an opponent, and no advantage may be gained by taking time to look for a player to whom to pass.
(c) Kicking or fisting the ball and all rough play should be penalized.
(d) If the ball passes over back- or side-lines, except when a goal is scored, it is returned into play by a 'throw-in' by a member of the opposite team from the point where the ball crossed the line. The penalty for all breaches of rule is a free throw taken from the spot where the breach occurred. No player shall be within 5 yards of the player taking the free throw.

## INDEX

## TO PARTS ONE AND TWO OF PHYSICALEDUCATION

 IN THE PRIMARY SCHOOLPage references to Moving and Growing are preceded by (i); those to Planning the Programme by (ii). Main entries for any subject are indicated in heavy type (e.g. 47). Illustrated entries are indicated by ill. (e.g. 47-52 ill., text with illustrations; ill. 8, illustrations only). The numbered plates between pages thirty-
two and thirty-three of Part Two are indicated by Pl.

ACCELERATION, (ii) 14
Accidents, avoidance of, (ii) 12-13
Activity, (i) 51, 55 (ii) 13, 14
Adolescence, growth at, (i) 8, 22
Age, and development, (i) 7-8, 14-25, 77 Agility, (i) 9 ill., 38, 45, 52, 73 ill. (ii) 13, 15, 23,25 ; movements, (ii) 14,15
Aiming, (ii) 45, 61
All against All races, (ii) 63-4 ill.
All-in races, (ii) 63-4 ill.
All-in Tag, (ii) 62
Anatomical framework of movement, (ii) 13 Ankle,
bending and stretching, (ii) 15,34 full use of, (ii) 48 springing, (ii) 34
Apparatus, (i) $41,45,73$; ill. $45,50,53,55$, 73, 74, 75, 76 (ii) $7-10,13$; Pl. 1-13 arms and shoulders, for, (ii) 45 balancing on, (ii) 57-8 ill. improvised, (ii) Pl. $12 a-c$ metal, (ii) Pl. 2-7
overcrowding on, (ii) 12
portable, (ii) 9, 13, Pl. 6, 7b, d
walking on, (ii) 34
wooden, (ii) 9, Pl. 17
Arch Ball Rounders, (ii) 68
Arm movements,
contests and game-forms in, (ii) 47 beneficial, the most, (ii) 45 trunk and leg, with, (ii) 46-7 ill. trunk, as part of, (ii) 47 ill. wall, at, (ii) 46 ill.
Arm and shoulder girdle movements, (ii) $14,15,16,45-7$
arm circling, (ii) 45-6 ill.
arm as part of trunk, (ii), 47 ill.
arm at a wall, (ii) 46 ill.
arm with trunk and leg, (ii) 46-7 ill.

Arm and shoulder girdle (contd.)
arm swinging, (ii) 45 ill.
climbing and swinging, (ii) 47 ill.
game-forms and contests, (ii) 47 ill.
Arm-lock wrestle, 60 ill
Astride jumps, (ii) 34
Attitudes, (i) 19, 46
ackward roll, (ii) 56
Backwards or forwards trunk movements,
(ii) 38-41

See also Trunk movements
Balancing, (i) 35, 41 ; ill. 54, 76 (ii) 34 57-8 ill.
Ball Tag, (ii) 62
Balls,
activities with, (ii) 17, 61
Bar, use of, (ii) 16,34
Batting, (ii) 61
Bean-bags, (ii) $17,47,63$
Bear walk, (ii) 35 ill.
Bench, stool and hoop, using, (ii) Pl. 13
Benches,
cartwheels over, (ii) 57 ill.
exercises on, (ii) $15,34,35$
jumping, for, (ii) 52-3 ill.
pulling along, (ii) 58 ill.
trunk movements on, (ii) 44
Bombardment, (ii) 66 ill.
Bounce, Hand Ball, (ii) 68-9 ill.
Bouncing, (ii) 45, 61
Bouncing and running relay race, (ii) 64 ill. Bounding and running, (ii) 50 ill.
Bowling, (ii) 45, 61
Bowling relay races, (ii) 63
Boys,
cartwheels for, (i) 8 ill
characteristics of, (i) 22,28

Boys (contd.)
limbing for, (i) 8-9 ill.
forward roll, (i) 8 ill.
national games for, (ii) 18-19
skipping for, (i) 10-11
trength of, (i) 8-9
throwing for, (i) 10-11 ill., 16-18 ill.
Buildings, school, (i) 39, 41, 42, 48 (ii) 7

CAMPING, (i) ill. 25
Cartwheels, (i) 58, 77-8 ill. (ii) 25, 57 ill
Cat-crawl, (ii) 37 ill., 58
Catch your Partner's Tail, (ii) 62
Catching, (i) 16, 18 ill., 27; ill. 32 (ii) 61, 68
Catsprings, (ii) 30 ill., $32,54-5$ ill.
Characteristics, inherited, (i) $7-11$ ill.
Chasing and dodging games, (ii) 62-3 Listed separately
Chinese Boxing, (ii) 60 ill.
Chinese Wall (' Hill, dill, come over the hill '), (ii) 62
Circle Bounce Ball, (ii) 67
Circle Chase, (ii) 62
Circling, (ii) 37
arm, (ii) 45-6 ill.
on apparatus, (ii) 58
Circular Rounders, (ii) 68 ill.
Climbing, (i) 8-9 ill., 15, 21, 28, 35, 51 ill. 76 ; ill. 22, 75, 79 (ii) $8-9,13,14,15$, 30-1, 32, 37, 45, 58 ill.
Clothing,
children, designed for, (i) 33
facilities for hanging, (ii) 8
15th-19th centuries, (i) ill. 33
minimum of indoors, (ii) 7
movement, effect on, (i) 12-14 ill. (ii) 14
provision and storage, (ii) 10
Clumsiness, (i) 38-9
Cock-fighting, (ii) 57 ill.
Compensatory and remedial movements,
(i) 72-3, 75 ill. (ii) 14-15, 34-61
arm and shoulder girdle, (ii) $14,15,16$,
45-7; see separate entry
leg, (ii) 34-7
trunk, (ii) $14,15,16,37-44$; see separate entry
Confidence, creation of, (ii) 13
Contests, (ii) 58-60
Listed separately
Contests and game-forms, (ii) 47 ill
Continuous arm swinging, (ii) 45 ill.
Continuous bending and stretching of both arms, (ii) 46 ill.
Couple Tag, (ii) 62

Crawling, (ii) 37
Crawling relay races, (ii) 63
Cricket, (i) 58 (ii) 8, 17-19
for girls, (ii) 19
Crow hop ', (ii) 37 ill., 50, 52, 57, 61
Crouch jumps, (ii) 15, 16, 30 ill., 32, 54-5 ill., 57 ill.

DANCE, (i) ill. 52, 59, 60-5 ill. (ii) 7, 19-23
Directed and free practice, (ii) 11
Direction of effort, (ii) 32
Distance, difficulties of judging, (i) 15
Diving, (i) 58
Dodge and Mark, (ii) 15, 6
Dodge Ball, (ii) 18
in Threes, (ii) 64
Dodging and chasing games, (ii) 62-3 Listed separately
Double Dutch (2 ropes), (ii) 49
'Double throughs ', (ii) 49
Dramatic movement, (i) 60, 66-71 ill. (ii) 20
Dressing-up, (i) 35, ill. 43
Dribbling, with foot and stick, (ii) 61
Drill, (i) 49 ill., 51 (ii) 11
Drums, boys using, (ii) Pl. 15, 18
Duck walk, (ii) 37 ill., 57, 58

EMBARRASSMENT, (i) 38-9
Environment, some effects of, (i) 11-14 ill
Equipment, small, (ii) 10
Exploration, of new movements, (i) 35-7
ill., $52-3,76,78$ (ii) $11,13,20,21$
Expression, (i) 37, 48 ill., 60
FAtigue, (i) 39, 46-8 ill.
Feet, (i) ill. 30 (ii) 26 ill.
balls of, (ii) 48
bare, (ii) 34
movements to develop, (ii) 26,34
Five stones', (ii) 61
Flag race, (ii) 64 ill.
Floors, condition of, (ii) 7
Foot,
and leg movements, (ii) 15
circling, (ii) 34
knee and hip movements, (ii) 36-7 ill. movements, (ii) 34
shaking, (ij) 34
Football, practice games, (ii) 17-18
Footbaths, (ii) 10,34
Formation, working in, (ii) 12
Forwards or backwards trunk movements,

## (ii) 38-41 ill.

See also Trunk movements

Forward roll, (i) ill. 8 (ii) 29 ill., 30, 32, 55 56 ill.
Frames, metal, (ii) Pl. 2, 5, 6, 7c
Framework, the, of the lesson, (ii) 13-17
Free and Caught, (ii) 62
Free Dodge Ball, (ii) 18, 64
Free Tag, (ii) 62
French and English, (ii) 18, 63
Frog Jump, (ii) 50 ill.
Furniture, (i) 46-8, 51; ill. 48
GAME-FORMS and contests, (ii) 47 ill.
Games, (i) $34,45,56-8$ ill. (ii) 17-19
chasing and dodging, (ii) 62-3 ill
grammatical movements, and, (i) 75-6
group, (ii) 64-9 ill.; listed separately
indeor and outdoor, (ii) 7
national, (i) 56, 78 (ii) 18-19
playground, (ii) 18
singing, (i) 65
Gate post,
climbing a, (ii) Pl. 10
jumping off a, (ii) Pl. 11
General activities, (ii) $14,15,48-61$
Giant strides, (ii) 50 ill .
Girls,
cartwheels, (i) 8
characteristics of, (i) 22 ill., 28
climbing, (i) 8-9 ill.
momentum in, (i) $8-9$
national games for, (ii) 19
skipping, (i) $10-11$ ill.
throwing, (i) 10-11 ill., 16-17, 31 ill
Goal markings, (ii) 67
Goal-shooting, (ii) 61
Gong,
girl with, leading group, (ii) Pl. 19
moving to the sound of, (ii) Pl. $14 a$
Gramophone, the, (ii) 22
Group games, (ii) 64-9 ill.
Listed separately
Group practices, (ii) 12
Growth,
at adolescence, (i) 8, 22
movement, related to, (i) 6-7, 35, 39
nutrition, importance of, (i) $11,13,51$
progress in, (i) 77-9
rhythm of, through exploration and
repetition, (i) 37-9
stages of, affecting development of
movement, (i) 14-32
Gymnastics, (i) 72-6 ill.
HALL, classes in, (ii) 7, 10, 21
Handball, (ii) 19

Hands, (i) ill. 30
Handstands, (i) ill. 54 (ii) 56-7 ill.
Handwalking, (ii) 57
Hanging, (ii) 45
Heading, (ii) 61
Heel raising and lowering, (ii) 34
Height,
and heredity, (i) 7-8, 14
and nutrition, (i) 11,13
'Hill, dill, come over the hill' (Chinese Wall), (ii) 62
Hip,
knee and foot movements, (ii) 36-7 ill.
movements, (ii) 34-5 ill.
rolling, (ii) 15
Hitting, (ii) 45, 61
Hockey, (ii) 17, 18, 19
goal-shooting practices, (ii) 61
Hoop, bench and stool using, Pl. 13
Hoop-la, (ii) 61
Hoops, use of, (ii) 48 ill., 51, 57, 61
Hopping, (ii) 15, 34
Hurly Burly, (ii) 67 ill.

IMAGINATION,
dramatic play, in, (i) 68
games, in, (i) 35,38
growth of, (i) 78
Individualism, (i) 40, 43
Infants' schools, (i) 41-5 (ii) 12, 17, 18, 23 Infants,
on metal apparatus, (ii) $\mathrm{Pl} .4,7 d$
on scramble net, (ii) Pl. 1
Intercepting in Threes (Pig in the Middle), (ii) 65

JUMPING, (i) 41 (ii) 11, 15, 26-7 ill., 34 49-53 ill.
apparatus, without, (ii) 49-50 ill.
benches or planks, using, (ii) 52-3 ill.
hoops, using, (ii) 50-1 ill., ill. Pl. 13
qualities of, (ii) 16
ropes or sticks, (ii) 51-2 ill.
skip, (ii) 34
'snake', the, (ii) 51 ill.
swinging rope, the, (ii) 51
weighted rope, the, (ii) 52 ill .
widening stream, the, (ii) 50 ill .
Jumping stands as targets, (ii) 66
Jumps, (ii) 15, 16, 30 ill., 34, 50-5 ill., 57 ill. Listed separately

KeEp the Ball Moving, (ii) 64
Kicking, (i) 16, 18, 27 ; ill. 52 (ii) 61

Kicking (contd.)
the hand, (ii) 15, 34 ill.
'Kicking horses ', (ii) 56 ill.
Knee, hip and foot movements, (ii) 36-7 ill.
Knee-boxing, (ii) 60 ill.
Kneeling trunk movements, (ii) 40 ill., 41 ill., 43 ill., 47
Knee-springing, (ii) 37 ill .
Knee swinging, (ii) 35 ill.
LADDER, walking on, (ii) 34
Lawn tennis, (ii) 19
Leaders, (ii) 11
Leap-frog, (ii) 13, 15, 27-9 ill., 32, 54
Leaping, (i) 41 ; ill., 23, 31, 45, 60, 61 (ii) 11,12

Leaping and twisting, (ii) Pl. 20
Leaps, running, (ii) 49-50 ill.
Learning, ways of, (i) 52-6, 78
Leg and foot movements, (ii) 15
Leg and trunk movements, with arm, (ii) 46-7 ill.
Leg movements, (ii) 34-7
eg swinging (ii) 35 ill.
Lifting, (ii) 45
contests, (ii) 58-60 ill.

- Lifting the log ', 47 ill.

Lincoln Tag, (ii) 62
Long jump, standing, (ii) 50 ill .
Lying trunk movements, (ii) 38-9 ill., 41 ill. 42 ill., 44 ill.
See also Trunk movements
marbles, (i) 27 ill.
Mats, use of, (ii) 55, 56, 57
Metal,
apparatus, (ii) Pl. 4, 7d
bars, (ii) Pl. 3
frames, (ii) Pl. 2, 5, 6, 7c
stand, (ii) Pl. 7 b
Mobility, (ii) $13,14,15,27,29,32$
Movement,
anatomical framework of, (ii) 13
art, as an, (i) 59-66
capacity for, increases with age, (i) 45
dramatic, (i) 60, 67-76 ill. (ii) 20
enjoyment of, (i) 56-61
factors affecting development of, (i) 7-32 ill.
rammar of, (i) 72-6 ill.
deas played out in, (i) 48
indoor and outdoors, (ii) 7
kinds of, many, (i) 67
mass, (i) 48
mastery of, (ii) 11

Movement (contd.)
modes of, (i) 33-9 ill.
music and, (i) 61, 64-5 ill. (ii) 21-3, Pl. 14
needs more than muscles, (i) 6 (ii) 13
observation of, (i) 7, 60, 75-6 (ii) 12 24-32
verall character of, (ii) 13
period, the, (i) 51-2
progress in, (i) 77-9 (ii) 17
qualities of, (ii) 16-17
speed in, (ii) 32
subjects worked out in, (i) 46
vigorous, (i) 46
water, in, (i) 58 ill
ways of learning, (i) 52-5
whole development, relation to, (i) 51
writing, of, (i) 46 ill
Movements,
agility, (ii) 14,15
compensatory and remedial, (i) 72-3 ill.
75 (ii) 14-15, 34-61 ; see also Compensatory and remedial movements
in unison, (ii) 11-12
Moving,
musical instruments, to, (ii) Pl. 14
slowly and softly, (ii) Pl. 16
Moving Target, (ii) 65
Muscles,
development of, (ii) 34
gi.rl and boy, in, (i) 9
gymnastics, and, (i) 72
movement needs more than, (i) 6 (ii) 13 trunk, (ii) 37
Muscular,
control, (i) 16
effort, (i) 20
Musical instruments, moving to, (ii) Pl. 14

NATIONAL,
dances, (i) 60-1, 64 (ii) 19-20, 22-3
games, (i) 56, 78 (ii) 18-19
Netball, (ii) 19
Net, climbing, (ii) 8, Pl. 1
Nursery schools, (i) 39-40 (ii) 12-13, 23
Nutrition, and growth, (i) 11, 13, 51
oblique high jump, (ii) 51 ill .
Observation of movement, (i) 7, 60, 75-6 (ii) $12,24-32$

Obstinate calf, (ii) 60 ill.
One Against Three, (ii) 62
One arm upwards, (ii) 45 ill.
PASSING and shooting, (ii) 61
Passing Rounders, (ii) 68 ill.

Pat-bouncing, (ii) 6
Percussion and movement, (ii) 21-2
Physical Education, (i) 49-55
planning the programme of, (i) 56 (ii) 7-10, 13-17
some fields of, (i) 56-7
P.T., (i) 42, 72-6 ill.

Pig in the Middle (Intercepting in Threes), (ii) 65

Pitches, (ii) 8, 17-19
Planks,
apparatus improvised from, (ii) Pl. $12 b$
cartwheels over, (ii) 57 ill.
Bear walk up, (ii) 35
jumping, used for, (ii) 52-3 ill.
on metal frames, (ii) Pl. 5
pulling along, (ii) 58 ill.
trunk movements on, (ii) 44
Playground, the, (ii) 7, 18, 21
Playing fields, the, (ii) 7-8
Pole jumping, (ii) 52 ill.
Pole,
on portable stands, (ii) Pl. 12a
walking along a, (ii) 15, 34
Post Ball, (ii) 66 ill.
Precocity, (i) 27, 28
Progress, (i) 77-9, (ii) 17, 24, 25
Pulling, (ii) 45
benches or planks, along, (ii) 58 ill.
contests, (ii) 58-60 ill.
Pushing, (ii) 45
contests, (ii) 58-60 ill.
Quort tennis, (ii) 68 ill.
Quoits, throwing, catching and spinning, (ii) 61

RACES, (ii) 63-4
Listed separately
Reaching as high as possible with one or
both arms, (ii) 46
Reading, (i) 20
and fatigue, (i) 46
Relaxation, (i) ill. 24
Relay races, (ii) 63-4
Remedial and compensatory movements,
(i) 72-3, 75 (ii) 14-15, 34-61

See also Compensatory and remedial movements
Repetition, (i) 35-7, 52-3, 77
Rhythm, (i) 60, 64, 65 (ii) 13, 20, 32
Rhythmic jumps, (ii) 34
Riding, (i) 20, 27, 28 ; ill. 26
Rocking-horse, (ii) 15, 39 ill.
' Rocking the dummy', (ii) 47 ill.

Rolls, (ii) 55-6 ill.
Rope climbing, (i) ill. 11, 28, 53, 55, 75 (ii) $8-9,30-1,32$

Rope ladder on metal frames, (ii) Pl. 5
Ropes, horizontal, (ii) Pl. $7 a$
Rounders, (ii) 19, 68 ill.
Rugby Touch (ii) 69 ill.
Running, (i) ill. 44 (ii) 13, 25-6, 32, 34, ill 25, 26
and bounding, (ii) 50 ill.
and passing, (ii) 61
leaps, (ii) 49-50 ill.
relay races, (ii) 63-4 ill.
variations of, (ii) 48-9 ill.
SAFETY, (ii) 12-13, 23-4
Sailing, (i) ill. 29
School children, fatigue in, (i) 39, 46-8
Schools,
Infants', (i) 41-5 (ii) $12,17,18,23$
Junior, (i) 45-6 (ii) 12, 17, 18, 20, 22, 23
Nursery, (i) 39-40 (ii) 12-13, 23
rural, (ii) 17, 19
Scoring runs, race, (ii) 63 ill.
Scoring runs, race, (ii)
Shoulder girdle and arm movements, (ii) $14,15,16,45-7$
See also Arm and shoulder girdle movements
Side to side trunk movements, (ii) 41
See also Trunk movements
Singing, (ii) 10
games, (i) 65
Sitting trunk movements, (ii) 44 ill., 39-40 ill., 42 ill.
See also Trunk movements
Skating, (i) 20, 27
Ski-ing, (i) ill. 20
Skill, (i) 51,56 (ii) $13,18,63$
Skip jumping, (ii) 34
Skipping, (ii) 34
abilities of boys and girls, (i) 10-11 ill. relay races, (ii) 63
variations for older children, (ii) 49
Skittle Ball, (ii) 66 ill.
Skittles, (ii) 61, 63, 66
Sleep, effect on vitality, (i) 14, 47
'Snake', jumping the, (ii) 51 ill .
Speed, (ii) 32, 45, 63
Spontaneity, (i) 48, 60 ill.
Standing,
feet apart, (ii) $45,46,47$
long jump, (ii) 50 ill.
trunk movements, (ii) 40-1 ill., 42 ill.
53-4 ill.; see also Trunk movements

Stand, metal, (ii) Pl. 7b, 7d
'Stand-O', (ii) 65
'Stepping stones ', (ii) 57
Stick wrestle, (ii) 60 ill.
Stoolball, (ii) 19
Stool, bench and hoop, using, (ii) Pl. 13
Strength, (ii) 13, 15, 16, 25, 31, 32
Strength, (ii) 13, 5 , i6,
Strides, giant, (ii) 50 ill.
Strides, giant,
Style, (i) 7, 77
Supported jumps, (ii) 53-4 ill.
Swimming, (i) 28, 56, 58, 78 (ii) 8, 23-4, 25 at various ages, (i) 20, 27 (ii) 23
Swimming baths, (ii) 8, 23-4
Swinging, (ii) 37, 58
along a bar, (ii) 16,32
arm, (ii) 45 ill.
TAIL TAG, (ii) 62
Targets, (ii) 66
Teacher,
class and, (ii) 11-13
draws up own scheme, (ii) 17
individual movement, and, (ii) 20-1
learning from the, (i) 54-5
Team,
games, (ii) 62-3, 65-9
passing, (ii) $17,18,65$
races, (ii) 63-4
sense, (i) 21,58
Team Tail Tag, (ii) 62
Tennis, (ii) 13
quoit, (ii) 68 ill.
Tension, (ii) 32

- Threading and unthreading the needle', (ii) 57 ill.

Three Court Dodge Ball, (ii) 66 ill.
Through-vault, slow, (ii) 29 ill., 32, 54
Throwing, (ii) $11,13,32,45,60,61$
boys and girls, compared, (i) $10-11,16$, ill. 17, 18, 32 (ii) 31 ill.
Time-table, the, (i) 45,46 (ii) 10
'Timing', (i) 27, (ii) 30, 32 ,
'Tipping the wheelbarrow', (ii) 56 ill.
Toe bending, stretching and separating, (ii) 34

Touch and Pass, (ii) 69 ill.
Trapping, (ii) 61
Tree Trunk, using, (ii) Pl. 8, 9
Trestles, (ii) $9, P l .12 b, 12 d$
Trunk and leg movements, with arm, (ii) 46-7 ill.
Trunk movements, (ii) $14,15,16,37-44$
benches or planks, on, (ii) 44
lying, (ii) ill.
sitting, (ii) 44 ill.

Trunk movements (contd.)
forwards or backwards, (ii) 38-41
lying, (ii) 38-9 ill.
kneeling, (ii) 40 ill.
sitting, (ii) 39-40 ill.
standing, (ii) 40 ill.
side to side, (ii) 41
lying, (ii) 41 ill. kneeling, (ii) 41 ill . standing, (ii) 41 ill.
twisting, (ii) 41-2
lying, (ii) 41 ill.
kneeling, (ii) 41 ill.
standing, (ii) 42 ill.
various directions combined, (ii) 42-4
lying, (ii) 42 ill.
kneeling, (ii) 43 ill.
sitting, (ii) 42 ill. standing, (ii) 43-4 ill.
Trunk muscles, (ii) 37
Twisting, (ii) 58
leaping, and, (ii) Pl. 20
trunk movements, (ii) 41-2; see also Trunk movements
Tugs-of-war, (ii) 59 ill.
Two Court Dodge Ball, (ii) 67 ill.
unison, movements in, (ii) 11-12
VARIOUS directions, trunk movements in
(ii) 42-4

See also Trunk movements
Vault, slow through, (ii) 29 ill., 32, 54
Vigour, (i) 45 (ii) 13-14, 32, 48
Vision, (i) 15-16, 18, 20, 46

WALL,
climbing, (i) 8 ill.
playing against, (ii) 61
walking on, (i) ill. 21
Walking,
faults in, (ii) 48
first steps in, (i) 15,37, ill. 6 (ii) 34, 48
on apparatus, (ii) 34
relay races, (ii) 63
variations of, (ii) 48
Wandering ball, (ii) 60
Water,
babies' pleasure in, (i) 14, 58 (ii) 23
delight, a source of, (i) $20,28,34$, ill. 35 play, (i) 56 (ii) 23
Weather, and physical education, (ii) 10, 14
'Weighing salt ', (ii) 47
'Wheelbarrow, tipping the ', (ii) 56 ill.
Writing, (i) 28, 46 ill., 20, 28, 46-7


[^0]:    * Note. Mobility: The movements which are included in this category are designed to produce or maintain maximum movement in the joints by using them to their fullest extent. Strength: The movements which are included in this category are, as the name suggests, designed to develop the strength appropriate to any movement or undertaking which is proper to the nature and ability of the child concerned.

