Physical education is more and more becoming an accepted part of the educational program having an equal standing with the more traditional subjects. As such it must be conceived, organized, administered, and conducted in accordance with accepted educational practices. Feeling the need of a physical education program aimed at contributing to the all-around development of the child and carried out in accordance with best educational practices, the investigator surveyed a large number of state and city courses of study and analyzed the proposals of leaders in the field. The conclusions drawn and recommendations made are of value to all schools, especially the larger ones in North Dakota, but are specifically related to the local needs of Grand Forks.

Contrary to the popular concept, physical education is not a separate distinctly different type of education from the general school program aiming only at physical development. It is education of the whole individual "thru the physical". As such, it makes a contribution to not only the development of the physical being and the acquisition of skills in a variety of physical activities, but to the development of personal and social qualities and the development of specific knowledge and habits of worth in every day life.

The term "physical education", in its broader sense, includes not only the regular required instructional program, but also the programs of intramural sports and interscholastic athletics. The intramural program and the interscholastic program are often considered extracurricular activities. No matter what they are called, they involve education of the individual thru physical activity and as such must be considered a part of physical education.

Interscholastic athletics should be an integral part of the physical education program. One important trend in this field is the appointment of trained physical education teachers as coaches and counting coaching as a part of the teaching load. Other trends are elimination of state tournaments; elimination of post-season games; limiting the number of basketball games to 16, football 7, track 7, baseball 16, golf 16, ice hockey 16; prohibiting spring football; use of regular staff members as coaches; financing programs by the board of education; prohibiting competition below grade ten; and requiring medical examinations of all participants. An urgent need is more emphasis on the educational aspects of competitive sports and less pressure to win at all cost in order to satisfy public demand.

A good intramural sports program is essential to complete the modern program of physical education with its emphasis on natural activities. If properly conceived, organized, and conducted, it provides an excellent laboratory period for all students to exercise and further develop the skills taught in the physical education class. It is not limited to a few as in interscholastic competition. Intramural programs have not been effective in many instances because of a lack of planning, facilities and a lack of realization of their true importance.

Programs of intramural sports should be in charge of a definite individual; should include a wide variety of competitive sports to meet the interests of all; should include non-competitive activities of a recreational nature such as hiking...
skating, etc; should not aim to primarily develop material for varsity sports; should be organized, conducted, and recorded in a business-like manner; and should make use of student leadership to a large extent.

In order to improve instruction in the required physical education program many of the practices relative to class organization, management and control must be re-evaluated and readjusted in accordance with the accepted practices of general education. Effective teaching with progression from grade to grade cannot take place unless pupils are assigned to physical education classes on the basis of grade just as they are assigned to classes in English, history, or mathematics. Furthermore, the natural sports program with its emphasis on individual guidance does not lend itself to classes of 50, 60, or 70 pupils. Physical education, properly taught, requires as much time for preparation as do other more academic subjects. Coaching duties should be considered as a part of the teaching load.

Health examinations are essential in order to promote and conserve the health of each individual child. In addition to continuous inspection by teachers and screenings by nurses, it is recommended that at least one complete health examination be required during each level of schooling; that is, primary grades, elementary grades, junior high school and senior high school. Such examinations should be detailed, performed by the family physician, recorded on a standard form, and made available to teachers who must work with the child. Individuals with handicap should be adapted activities to suit individual needs and in accordance with recommendations of the physician.

Grades and credit should be given for physical education. A minimum of 1/2 credit per year should be granted with one full credit counting toward graduation. Grades must be based on a definite plan and not assigned in a hit or miss manner as they so often have been in the past. The proposed plan is to base 50% of the grade on achievement in physical skill and activity; 30% on specific health and social factors; and 20% on knowledge of games, activities and rules. Knowledge of games, activities and rules is to be measured by written objective tests. Activity skills are to be determined by skills tests with some judgement entering into the final grade. Health and social factors are hard to measure but by using a rating scale which is carefully worked out, it is possible to arrive at a mark with some objectivity.

It is emphasized that class routine such as roll call and team formation, be held to a minimum in order to utilize to a maximum the limited time for activity. The permanent squad system with elected squad leaders is recommended to facilitate instruction and to provide opportunities for leadership and followership.

Principles of learning operate in teaching physical education activities as well as in teaching other more academic work. The instructor must plan carefully, use sound methods of approach, and skillfully use explanation, demonstration and discussions.

The program of activities must be so organized as to provide for progression, variety and individual needs and interests. Activities from each of the following general headings are essential to a well-rounded program: team sports; individual sports; stunts, tumbling, pyramids and apparatus; rhythmics; mass games; formulized activities; self-testing activities; and restricted activities.

L. Marti
A GUIDE FOR BOY'S PHYSICAL EDUCATION

IN

THE GRAND FORKS PUBLIC HIGH SCHOOLS

A Thesis

Submitted to the Graduate Faculty

of the

University of North Dakota

by

Glenn S. Hubbard

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for the Degree of

Master of Science in Education

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This thesis, presented by Glenn Scott Hubbard, in partial fulfillment of the requirements for the degree of Master of Science in Education, is hereby approved by the Committee of Instruction in charge of his work.

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CHAPTER I
INTRODUCTION

The physical education program in the Grand Forks Public High Schools is critically limited by lack of space both indoors and out. Central High School has no outdoor playground, and the physical education classes for more than five hundred boys must be conducted in a gymnasium much too small for the purpose. South Junior High School is equally limited as to indoor space, but does have a small outdoor playground.

The modern physical education program with its emphasis on games and sports requires more extensive play areas than did the more formal type of program. It includes such games as football, touch football, basketball, baseball, softball, volleyball, soccer, badminton, table tennis, shuffleboard, and many other group and individual games, with a minimum of emphasis on calisthenics, drills and other formal activities.

Thus the handicaps under which the physical education program is attempted in the Grand Forks high schools are immediately evident.

Purpose of the Study

The purpose of this study is to set up a guide for instructors in physical education whereby the maximum use and benefits may be obtained from the facilities available in the Grand Forks public high schools or other schools of equally limited facilities. The scope of the problem

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is limited to the physical activity phase of the overall physical education program and does not include other phases such as health, safety, and social development except as they are incidental to the phase under study.

Source of Materials
The problem was attacked from three avenues of approach:
1. A representative survey of existing courses of study and professional books and periodicals in the field.
2. Personal interviews with professional personnel in the field.
3. Personal experience as an instructor and director of physical education at Grand Forks Central High School.
State courses of study used in this survey include Minnesota, Iowa, Indiana, Ohio, Illinois, South Dakota; city courses of study include Bismarck, Fargo, Great Falls, Mont., Fort Worth, Texas, Long Beach, Cal., and others.

Method
A detailed study was made of the above course with the local limitations and problems in mind. Based on this study a tentative program of activities was used experimentally in the boy's physical education classes at Central High School to determine a suitable adaptation to local facilities, needs, and administrative policies. Thus by screening existing courses of study, texts, and other professional writings, and integrating that material with the program developed locally through
trial-and-error and the experience of the writer, the following chapters were developed. Written as a guide for local physical education instructors, these chapters represent the conclusions and recommendations of the writer resulting from the study described above.
CHAPTER II
FITTING PHYSICAL EDUCATION INTO A PHILOSOPHY OF EDUCATION

Physical education, like any other part of the curriculum, must contribute toward the general purpose of education. The conception of education as the process of growth through experience is now accepted by most progressive educators. Dewey defines education as "that reconstruction of experience which adds to the meaning of experience, and which increases the ability to direct the course of subsequent experiences." This means that education is more than merely learning facts out of a book or doing assigned tasks without thought. It is a continual process during which each new experience adds to the total experience and becomes a composite part of the whole.

In the light of the above conception of education our curriculum should:

1. provide development of necessary skills, correct habits, and right attitudes.
2. provide the necessary knowledge, or information as to where it may be obtained.
3. reflect the social, political, and economic problems of the present world.
4. prepare the student to choose wisely his occupation and social life.

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5. develop the student's aesthetic nature for worthy use of leisure time.

6. provide for health, safety, and character education.

The modern program of physical education contributes in some degree to all of the above objectives but more particularly to the last two. Further, it is designed to contribute directly to the Seven Cardinal Principles of Education in the following ways:

1. Health.- promotion of organic development and mental well-being through controlled physical activities.

2. Vocation.- development of neuro-muscular control and skills.

3. Citizenship.- development of a sense of justice and fair play, recognition of the rights of others, and of the individual's responsibility to society.

4. Worthy Use of Leisure Time.- Teaching and training in activities that will serve as wholesome recreational activities both now and later. This aspect of physical education is of extreme importance due to shorter working hours resulting in more leisure time for most individuals.

5. Command of Fundamental Processes.- all body mechanics constitute a part of the fundamental process and are best developed through physical education.

6. Worthy Home Membership.- like interests in sports, games, and other forms of recreation contribute toward cooperation and sociability, and may be developed through physical education.
7. Ethical Character.—physical education can promote good character by setting up desirable attitudes, ideals, and standards of conduct by offering innumerable opportunities for choices.

Aim of Physical Education. The aim of physical education is to develop and educate the individual by means of wholesome and interesting physical activities so that he will attain maximum physical and mental capacities, and will learn to use his powers intelligently and cooperatively as a good citizen even under violent emotional stress.\(^2\) One must not think of physical education entirely as a process of muscular and organic development; it is education through the physical rather than of the physical. It is most important as a means of guiding individuals in good ways of living and behavior. A better world can be developed only by better people living in it; better living, then, may well be the ideal of physical education.

General Objectives.\(^3\) The ultimate goal, aim, or ideal is usually reached by attaining a series of intermediate objectives. The following outline includes the most important general objectives of the modern physical education program:

I. Development of skills for immediate and future use.
   A. Ability to meet physical emergencies.
   B. Alertness and quick response.

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C. Rhythm, timing, judgment of speed, distance, force, and weight.
D. Skills in games that will satisfy the natural drives of running, jumping, throwing, striking and climbing.

II. Development of the physical being.
A. To assist the normal growth and proper functioning of the skeletal system.
B. To assist normal growth and proper functioning of the organs and organic systems.
C. To provide physical exercise in order to recharge the nervous system, and which eliminates extreme sustained mental effort.
D. To assist in developing strength to do an ordinary day's work, and to build up a reserve capable of meeting unforeseen emergencies.

III. Develop knowledge and habits.
A. To develop a knowledge of rules, techniques, and methods used in games so that intelligent participation may take place.
B. To develop habits of play that will carry over into out-of-school activities.

IV. Development of personal and social qualities.
A. Sportsmanship, including: will to win, abiding by the rules, courtesy, teamwork, respect for others, self-sacrifice, and being a good winner as well as a good loser.
E. To develop emotional control including self-discipline and self-direction.
C. To develop alertness, enthusiasm, initiative, courage, and energy.
B. To develop leadership and followership.
I. To develop the social qualities of friendliness, cheerfulness, and the ability to mix agreeably with others.
F. To develop social cooperation including loyalty, respect, obedience, and team work.

Student Objectives. The objectives outlined above may generally be thought of as teacher and administrative objectives. Too often we neglect to think of an educational program in terms of student objectives. Little research and investigation has been done in this field but experience in teaching physical education suggests that student objectives cover a wide field and vary greatly from teacher objectives. They may vary from the purely mercenary objectives of getting a grade and "meeting the requirements" to the more normal and desirable ends of having fun and being with "the gang", learning more about games, becoming more proficient in activities, developing more strength and endurance, making the team, or just getting some relaxation and recreation by breaking away for a brief time from academic study. Such normal and healthy objectives on the part of the student should make it fairly easy for good instructors to attain their objectives.

Individual Characteristics. In considering a program for junior and senior high school boys based on the above objectives it must be remembered
that the junior high boy is relatively immature. He is neither child or adult. He is physically awkward and immature, emotionally erratic, socially unstable, and mentally is still not capable of extensive reasoning. Activity should not be too strenuous and should be alternated with rest periods, particular care being taken that no part of the body is subjected to undue strain.

Activities for the senior high boys should be selected on the basis of comparably greater physical and mental development. However, it must be recognized that there can be no clear-cut dividing line between these two student groups, and that there will be an overlapping of activities. For example, though football may be played in both grade levels but the junior group would receive more emphasis on fundamentals of catching, passing, and running with the ball, and in playing lead-up games; periods of play will be shorter and body contact minimized as much as possible. In the senior group the fundamental skills will be reviewed and practiced from time to time, but more emphasis will be placed on the execution of plays, more time will be spent on actual games, and the qualities of leadership and social responsibility will be stressed.

The Program of Physical Activity. The program of required physical activity may be generally divided into three parts: the required physical education classes, intramural athletics or sports, and interscholastic athletics. The latter two will be discussed in some detail in Chapter VI.

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4See Appendix I for Age Characteristics.
The program of required physical education classes must be based on two main considerations: meeting the requirements of the State Department of Education, and attaining as nearly as possible a broad program to meet the local needs, interests, and capabilities. Such a broad program should have as one of its aims the participation in some activity of every boy in school. The State of North Dakota requires that all high school students be enrolled in physical education activities at least two days each week each year; it also strongly recommends that in fully accredited schools where adequate facilities are available, both boys and girls be provided such activities four days each week each year. It is felt that no student who is physically fit to attend school regularly and to carry a normal load of academic work should be permitted to evade the physical education requirement. Excuses from participation will be discussed in Chapter III.

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5 Administrative Manual for North Dakota High Schools, Bismarck, The Department of Public Instruction, 1944, pp 76.

CHAPTER III
THE REQUIRED PHYSICAL EDUCATION PROGRAM

Section I. General School Administrative Policies

The method of class assignment, class size, teacher load, health examinations, excuses from the requirement, time allotment, credit, and marking must be determined by general school administration policy. Physical education, however, presents some special problems that must be considered in forming a general administrative policy. Some of these special problems are discussed in the following paragraphs.

Method of Class Assignment. The main objective in class assignment is to group together students in approximately the same stage of physical, mental, and social development, having similar abilities, interests, and needs.\(^1\) It is poor policy to assign students to physical education classes on the basis of free time and study halls, thus using the gymnasium as a catch-all for students otherwise unoccupied. Such practice defeats the opportunity for educational progression within the class. The better policy, and one that is successfully used in many schools, is to assign students to physical education classes at the same time and in the same manner as he is assigned to his academic classes. Central High School, East Grand Forks, Minn., obtains the most effective

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homogeneous grouping by assigning students to physical education classes first, then building the rest of his schedule.

Particular attention should be given to the assignment of those in need of special corrective exercises. So far as possible such students should be assigned to classes in which activities of a normal type are carried on in a normal manner and in a natural environment, and may be used to correct the physical defects. Isolation of such defective individuals or groups in unnatural environment may result in harmful social and psychological reactions that would more than offset the physical or anatomical benefits that might occur.

Fair competition between groups or individuals is another consideration in class assignment. Such grouping makes for better continuity in the program. Still another group that must receive special attention is the group that is out for interscholastic sports. It is generally felt that boys practicing regularly with the football, basketball, and track squads should be excused from physical education classes during the regular season. Some physical education administrators feel that varsity athletes should be allowed to participate in regular gym classes during the athletic season provided such participation is limited to the extent that the pupil does not over exert himself physically. Such participation may be justified on the grounds that it affords the pupil an opportunity to take part in activities otherwise denied him, and which might have a definite carry-over value to him. In the Grand Forks schools, however, such participation presents a definite problem of
over-loading classes already beyond the recommended limits. It is felt that varsity squad members should be assigned to definite classes in the same manner as other students, and that they should attend those classes when not engaged with the varsity squads. This method has been found by the writer to facilitate the keeping of records and awarding grades. Prior to adopting this method "forgotten boys" were often embarrassed to find commencement time approaching and no credit for physical education to be found on their record.

Class Size and Teacher Load. The scheduling of physical education classes usually presents difficulties because of lack of space and teaching personnel. The teaching load for any one teacher should not be more than 40 in any one period. The North Central Association recommends a pupil-teacher ratio of 25 to 1; the maximum number of classes taught daily to be 5; and the total pupil-periods per day not to exceed 150. In no case should a teacher be permitted to exceed 6 clock hours of organized work per day. This maximum should include after-school activities, estimated on a clock-hour basis comparable to the regular school day assignments. Such activities will include team coaching, intramural sports, and playground direction.

Health Examinations. The only accurate way to determine the individual's fitness for participating in physical education activities is by means of a good physical examination performed by a competent physician. Such an examination serves several important purposes: to

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2 Wm. LaForte, "The Physical Education Curriculum", The University of Southern California Press, Los Angeles, 1942, pp 50.
determine the presence of physical defects; to provide a guide for the correction of such defects; to detect and provide for the exclusion of communicable diseases; to determine whether or not the student's health is such that he may participate in strenuous physical activities without danger to his health; and to develop a scientific attitude toward disease and body malfunctions. Although North Dakota laws do not require a physical examination for students it is recommended in the Administrative Manual for North Dakota High Schools that a health examination be given each student prior to participation in physical education activities. It is particularly important that health examinations be required before students are permitted to participate in interscholastic sports or any other form of strenuous activity.

It is generally felt that health examinations should be required of every student at least once in each grade level. The trend in this direction is noted in the results of the biennial survey of education in the United States conducted in 1938-40.

The examination should include the heart, lungs, vision, hearing, teeth, nose and throat, nutrition, skin, feet, spinal deviation, general posture, height and weight. It is desirable that a continuous, progressive, and permanent record be maintained and passed on with the student from each grade level to the next. This record may well include records of


Inoculations, vaccinations, and other pertinent data.\(^5\)

The greatest administrative problem in connection with a school-wide program of health examinations is arranging for medical examiners and financing the program. The entire procedure must be carefully planned. The parents and community should be "sold" on whatever plan is adopted. One way to get this backing is to work through the Parent-Teachers Association or some other civic-minded organization. It is also well to enlist the aid of prominent individuals immediately concerned with such a program. A first step in approaching the problem might well be the organization of a committee composed of the Superintendent of Schools, school principals, public health nurse, city health officer or representative of the local medical association, PTA representatives, physical education instructors, and any other individuals deemed necessary.

Some problems that will have to be worked out by the committee may include:\(^6\)

1. Why should these examinations be given?
2. Why should the tests listed on the medical form be included?
3. Who will be required to take the examination?
4. Will the students go to their family doctor. If so, how will the blank get to the doctor and how will it be returned to the school?
5. If a doctor is coming to the school what preparations must be made?

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\(^5\) See Appendix II for sample examination forms and records.

\(^6\) High School Victory Corps Medical Examinations, a pamphlet prepared by the North Dakota State Department of Public Instruction and the North Dakota State Department of Health in cooperation with the North Dakota Anti-Tuberculosis Association.
6. What will the cost of the examination be?

7. Who is going to pay for the examination?

8. Who is going to be responsible for checking the records after completion of the examination and see that the doctor's recommendations are carried out.

In most cases it is felt the parents will be willing and able to pay the costs of the examination. There may be a small percentage of cases who will need financial assistance. It is suggested that the school board be responsible for any financial assistance required. The local Christmas Seal chairman, Community Chest, and local medical association are other possibilities for aid.

On the basis of health examinations students may be classified into three groups: (1) unlimited participation; (2) restricted activity due to permanent or temporary conditions; (3) remediable cases. The last two groups may usually be combined in classes with specially adapted activities according to individual needs. Such classes should be small, not exceeding 15 to 20 members in order that a maximum amount of individual attention may be given by the instructor.

School officials or teachers must never assume the responsibilities of medical officers. Physical education teachers are occasionally prone to diagnose and advise students on vital health matters. This should not be permitted since it not only endangers the health of the student, but antagonizes the medical profession, and paves the way for legal suits against the school administration. First aid, in its strictest interpretation, should be the limit of service offered by physical education instructors, further service being referred immediately to the
family physician. When health examinations are not available to the student the physical education instructors should keep a record of weight, height, and general structural and posture tests for each student. This record may be kept on a form together with achievement test records and other individual statistics.

Excuses From Requirement. One of the most difficult administrative problems in physical education is the formation of a definite policy and procedure for regulating excuses from physical education classes. Many times students, not actually handicapped, will bring notes from parents or family physicians requesting waiver of the physical education requirement. Such requests may be based on anything from a slight head cold and fear of a shower bath making it worse to really legitimate reasons. Requests from family physicians are not always reliable either, since they are often issued merely upon the request of an over-indulgent parent rather than on actual need as determined by a thorough examination. Excuses from activity should be granted only on the basis of a certificate from a licensed physician stating specific reasons and making specific recommendations. If the reason for the request is of a temporary nature, the excuse should be granted for a limited time after which another examination should be required together with another doctor's certificate stating that the student may or may not participate in regular class

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activities. Requests by parents for an excuse for the day because of a cold, flu, or other illness should be carefully evaluated by the instructor, boy's advisor or principal. As a general rule, if the symptoms indicate that it is inadvisable for the student to participate in physical activities it is equally inadvisable for him to remain in school.

Grading in Physical Education. Grading in physical education should follow the same system as used in other subjects, and report cards should be marked each 6-week period. It is not satisfactory to use grades of S and U, or P and F, since this type of grade does not afford the student an idea of how he is progressing. Since grading is relative the student should have full knowledge of how he stands in relation to the rest of his group. To this end standards for each division of the grading scheme should be posted to serve as guides and incentive for improvement. It is felt by most physical education instructors that improvement and effort should count more toward a grade than natural physical ability. Wall charts for self-testing scores and student rating on uniform, shower, locker and other routine checks may be used to good advantage by instructors and students alike. Self-grading by the students and grading by squad leaders on such charts, if carefully handled, is a good means for developing desirable social characteristics in the individuals. A detailed basis for determining grades will be found in section II of this chapter.
Credit for Physical Education. Credit toward graduation is given for physical education the same as for other subjects. In conformance with the Administrative Manual for North Dakota High Schools one fourth credit is awarded for the successful completion of each of the four years of high school. This credit is based on two 60-minute periods per week. If the student takes four periods per week he is given one-half credit per year or one-fourth credit per semester. However, since a minimum of two periods per week is required by the State Department of Education and because of the crowded condition of classes in the Grand Forks schools it is inadvisable to permit students to take four periods per week unless it is necessary to make up the required credits prior to graduation date. In any case one full credit in physical education is required for graduation unless all or part of the requirement is waived on the basis of a doctor's certificate of inability to participate.

Section II. Administrative Practices Within the Department

The care, maintenance and preparation of playing areas is primarily a function of the Superintendent of Buildings and Grounds and the building custodian. Physical instructors are generally responsible for the temporary marking of play areas and having light equipment ready for classes. They are also responsible for the careful checking of equipment for safety and for training the students in the safe use of equipment. Such safety training is a vital part of the physical education program. Marking of outdoor courts or diamonds may be done by students under the direction of the instructor as part of the training
in knowledge of games and activities. Permanent markings such as painting of lines on gym floors, installation of backboards, ropes, and permanent fixtures should be the responsibility of the Superintendent of Buildings and Grounds. Careful prior planning by the instructor is necessary to insure that grounds and floors are ready for use when needed. Care of outdoor play grounds and athletic fields must be maintained throughout the summer months to insure proper condition for use when the fall term opens. Such care includes regular mowing, weed control, painting, seeding, and beautifying the areas. Well-kept areas make for greater pleasure and satisfaction in their use.

**Care and Control of Equipment.** The care and control of equipment and supplies is the responsibility of the director of physical education. Prior to the end of the regular school year a careful inventory of supplies and equipment should be made and a requisition made for the material necessary to carry out the program for the following year. Requisition for equipment for varsity sports should be the responsibility of the head coach of each sport while the director of physical education should handle requisitions for the intramural sports and other phases of physical education programs. As a general rule equipment for boys and girls physical education should be ordered and kept separately. This makes for more definite responsibility, better care, insurance that supplies will be available for both, and in emergencies will supply multiple materials.

An adequate supply of equipment is necessary to good class instruction. For example, a class of forty students receiving instruction
in basketball fundamentals would require from four to eight basketballs. One basketball in such a class would mean that each student would have the ball less than a minute during each class if the time were divided equally. Efficient instruction and satisfaction to the students is not possible under such conditions. Equipment should be requisitioned on the basis of the over-all program and the number of students to receive instruction at a given time. The following is a check list of equipment that may be used in an average physical program:

**Permanent Equipment**

- Balance Beams
- Buck
- Climbing Ropes
- Discus
- Eye Guards
- Horizontal bars
- Horse
- Hurdles
- Indian Clubs
- Inflator
- Jumping Standards
- Mat
- Marker (lime)
- Parallel Bars
- Ping Pong Tables
- Phonograph and records
- Rings
- Rake
- Scales
- Shots (8 and 12 pound)
- Shovel
- Spring Board
- Stop Watches
- Tape Measures (50 & 100 Ft.)
- Tennis Nets
- Volley Ball Nets & Standards
- Vaulting Poles & Box
- Wands
- Whistles

**Expendable Equipment**

- Archery equipment
- Aerial Darts & Baskets
- Badminton equipment
- Baseballs
- Baseball Bases
- Baseball Bats
- Basketball
- Boxing Gloves
- Dart Sets
- First Aid Supplies
- Footballs
- Golf Clubs
- Golf Balls
- Handballs
- Horseshoes (outdoor & indoor)
- Ping Pong Paddles
- Shuffle Board Sets
- Shin Guards
- Soccer Balls
- Soft Balls
- Soft Ball Bats
- Tennis Balls
- Tennis Baskets
- Volleyballs
- Medicine Balls
- Jumping Ropes
Obviously this list of equipment does not cover the entire field, and with the added stress now being given to activities with a high carry-over value, many items for dual sports might be added. Similarly, some programs will not require some of the listed items because space limitations prevent the inclusion of the activity in the program.

In requisitioning equipment it is good economy to buy the best quality merchandise. With proper care and use the longer life of quality goods will more than offset the added cost. In the case of basketballs, for example, it has been found practical to purchase new balls each season for the varsity teams and pass the good used ones on to the gym classes; such balls have invariably outlasted lower grade balls purchased new for the physical education classes. For outdoor use the rubber basketball of official size and weight has been found to outwear the official leather-covered ball and is satisfactory for general use.

It is important that the students be impressed from the beginning with the proper use and care of the equipment. This is a responsibility of all instructors and supervisors. It is the duty of instructors to be sure that all equipment to be used is in proper condition before it is put into play. Inflated goods must be properly inflated to get the correct reaction and facilitate development of skill in handling. Sewed balls should be removed from play at the first sign of ripping and promptly repaired; this, of course, is true of any equipment. Mats should always be carried, never dragged; street shoes should be removed before working on mats; mat covers must be kept clean, and mats stored.
promptly after use. Canton flannel which may be washed is good material for mat covers. Basketballs, volleyballs and other leather material should be cleaned regularly with saddle soap or a commercial ball-cleaner; polishing with soft cloth dampened with ordinary liquid floor wax will tend to keep dirt out of the pores of the leather and make cleaning easier. Moistening the inflating needle with glycerine tends to keep the rubber valves soft and prevent leaking. Balls should be deflated to merely enough air to hold the ball in shape before being put in storage. All equipment should be stenciled or marked for identification with a permanent ink or paint. Equipment issued to students or members of athletic squads should be listed by number and item on an equipment issue form and the student required to sign for each article. Use of a printed form and card index system facilities issue and recovery of equipment. A certificate on the form stating that the student agrees to to pay for any equipment lost or damaged through undue wear and tear will aid materially in reducing “lost” and carelessly damaged items. Equipment used for class periods should be returned to the store room immediately after use and kept there until it is needed for the next class. Quite often it is possible to arrange for a student assistant or equipment manager to care for the equipment under the supervision of the instructor. The ideal, of course, is to have a paid equipment manager to care for and repair equipment and see that it is ready and in

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3 See appendix III.
place when needed. This job may often be combined with that of custodian of the gym and playground. Student assistants may sometimes be found among those who are limited in their scope of activity by doctor's orders, or among members of varsity athletic squads who are excused from active participation in gym classes. In any case the instructor is responsible for seeing that equipment is ready when needed, kept in repair, frequently inspected for safety, properly marked for identification, carefully stored when not in use, and for training students in the proper care and use of equipment, as well as thorough training in necessary safety measures.

**Supervision of Locker Rooms and Showers.** Close supervision of locker rooms and showers is necessary to safeguard the health of students and maintain satisfactory discipline. One shower head to each four students is a good ratio. Most physical education instructors like the shower heads located about shoulder high and with individual hot and cold controls. Liquid soap may be furnished from dispensers in the shower room or individuals may furnish their own soap. In the latter case frequent checks will be necessary to insure the use of soap by all individuals. The liquid dispenser is probably the most hygienic system since it eliminates the customary "borrowing" of soap from other students. Towels are an individual problem and should be handled on the same basis as uniform requirements. There should be two sets of duckboard for the drying area so that while one set is in use the other is being dried and aired, preferably in the sunlight. Particular care is necessary in
the cleaning and disinfecting of the floors, duckboards, benches and other facilities in the shower and locker rooms because this is where athlete's foot and many common skin diseases are most commonly contracted. Careful supervision of the janitorial work and frequent inspections of drinking fountains, lavatories, toilets, lockers, and showers is the responsibility of the instructor and is necessary to insure proper functioning and sanitary conditions.

Every effort should be made to avoid over-crowding in the locker room. Each student must have an individual basket or locker in which he can and must lock up his uniform when not in use; then there must be a locker for each student for class use only in which he can and must lock up his basket and street clothes while in class. The problem of theft is ever present in locker rooms and will crop out occasionally in spite of every precaution. With the basket-locker system used at Central theft has been reduced to a minimum by requiring the student immediately upon removing his basket from the rack to put it, together with his street clothes, in the locker assigned him and lock it with the same lock he uses on his basket. His locker remains locked while he is in the shower room, then as soon as he finishes dressing he puts his uniform in the basket and locks it back in the rack. Such thefts as have occurred under this system have been traced generally to carelessness on the part of the student in failing to lock his basket or leaving equipment lying in the locker. To guard against this kind of loss students are assigned alphabetically as locker room checker with
the duties of seeing that showers are turned off, all lockers left open, and all loose equipment picked up and the owner either located right then or the equipment turned in to the office where it is placed in a salvage box and held for reclaiming.

Combination locks are the most satisfactory for locker room use; they eliminate the inconvenience of locking the key in the locker, losing keys, and necessity of keeping duplicate keys. One master sheet of combinations should be kept in the principal's office and another in the instructor's file. No student should be allowed to open another's locker or keep equipment in space other than that assigned to him. Benches should be securely fastened to the floor; there should be approximately three running feet of bench space per student. Several mirrors should be securely fastened to the walls or end locker rows at medium height. Good discipline is essential in the locker room to prevent accidents and destruction of property through boisterous horse-play or malicious mischief. Squad leaders may assume part of active supervision of shower and locker rooms, but primary responsibility cannot be delegated by the instructor. Close supervision offers an excellent opportunity for good training in health habits and the prevention of disease as well as good social conduct and respect for the property and rights of other people.

Gym Costume Requirements. Costumes of uniform design and color add greatly to the appearance of classes and may possibly contribute somewhat to good morale. The usual gym uniform consists of a T-shirt or sleeveless cotton jersey, short trunks, supporter, medium-weight wool or part-wool socks, and rubber-soled shoes. The soles of the
CHAPTER IV
SPECIAL METHODS OF ORGANIZATION AND TEACHING TECHNIQUES

Section I. Methods of Organization

Time Allotment. Class instruction is on the basis of two fifty-minute periods each week. With this limited time for instruction it is extremely important that the teacher organize the daily program for maximum utilization of the period. The following is offered as a guide in allotting class time to the various activities:

- Administrative .................. 3 minutes
- Formalized* .................. 3 minutes
- Sports and games ............ 20 minutes
- Self-testing* ................. 10 minutes
- Hygienic ...................... 14 minutes

*Are not included in every class period.

Administrative activities include such items as taking roll and making announcements. Formalized activities include calisthenics, marching, etc., and are generally not included in every class period, although some instructors feel that two or three minutes of such activities are highly desirable as opening exercises. In any case, they should not exceed the time indicated.

The self-testing program is a good individual incentive to improve and definitely has a place in the program. It is generally not included in every class period but some time should be provided each week for the student to test his own progress. When formalized and self-testing activities are not included in the lesson plan that time may be utilized for sports
and games or such other special activity as may be desired. Hygienic activities include showers and changing clothes both before and after class. Three minutes is ample time to remain in the shower.

**Checking Attendance.** Experience indicates that some formality is necessary in administering a physical education class. It is suggested that formality and discipline be required in the opening exercises of each class period. There are several good methods of taking roll but whatever method is used should be based on the following principles:

1. **Accuracy**
2. **Speed** (should not require more than 1 minute).
3. **Flexibility**
4. **Student participation**

With the above principles in mind the following methods of taking roll are suggested:

1. **Recording Absent Numbers:** Students are lined up alphabetically and assigned consecutive numbers from 1 up. These numbers are permanent. At command of the instructor students call off their numbers in order and the absent numbers are recorded in the class book opposite the corresponding name. It may be well to read back the absent numbers to make sure the student is absent.

2. **Squad Method:** The class is divided into squads (preferably two or four, depending upon the size of the class) and a leader is assigned to each one. When the whistle blows to assemble the class for roll call, students fall in by squads and each leader checks the absentees in his squad. The instructor calls for the report and leaders call out the names of their absentees in the
order of squads from left to right. The use of small cards on
which squad leaders record absentees and take notes on individual
or squad activities has been found helpful and convenient.

3. Recording Visible Numbers: Numbers are painted on the floor in
one or two lines. Students are assigned numbers in the order
their names appear on the class roll. When the whistle blows
for roll call students fall in line on their number. The instruc-
tor records the uncovered numbers on a card to be entered later
in his class record book. This method is quick and accurate but
has the disadvantages of not having student participation, and
of marking up the floor surface with marks that are of no use in
any other activity.

It is important that attendance be checked punctually at the beginning
of the period so that office attendance clerks are not delayed in their
work, and so that class activities may be started promptly.

Class Organization. If our class periods are to result in more than
just fun for the pupils, we must have definite class organization and
procedure. Fun and enjoyment should result from all activities, but we
should not lose the opportunity to develop cooperation, sportsmanship,
loyalty, fairness, and orderliness. The organization of the class into
squads offers a good opportunity to develop these social characteristics
as well as to develop leadership and followership.

Squads numbering from six to twelve boys should be organized under
a squad leader appointed by the instructor or chosen by the squad members.
In the average size class, four squads make a convenient arrangement for
games and other contests. This method of class organization offers a good
opportunity for classification of students within the group, measurement
of pupil progress, and promotion of rivalry and enthusiasm. The ability
of the squads should be equalized as much as possible. This may be accom­
plished by selecting squad members on the basis of achievement tests,
physical efficiency tests, or by age, height, and weight standards.¹

Squad leaders should be selected on the basis of their physical
ability, leadership ability, interest and willingness to do extra work,
or need to develop initiative. Two other methods of selection, probably
less effective, are election by the squad or class, or by passing certain
physical and knowledge tests. Assistant leaders should be selected on the
same basis as the leaders. It is a good policy to change leaders every
three or four weeks in order to give as many pupils as possible a chance
to develop their leadership qualifications.

Types of Formations for Various Activities. Methods should be
devised for getting the class into formations in an orderly manner and
with as little loss of time as possible. The methods used will naturally
be selected by the instructor according to space, class size, and personal
preference. Each pupil should carry the same number and hold the same
relative place in the squad day after day; thus he will know exactly where
to place himself in any formation called for by the instructor or squad
leader. Three class formations are named and diagrammed below but many
others may be devised for use according to space limitations and require­
ments of specific activities.

¹See Appendix IV.
1. Squad formation (4 squads)

6666
5555
4444
3333
2222
1111

I (instructor)

2. Pair formation by squads

246 246 246
135 135 135

I

(3 squads)

3. Single line formation (entire class)

1 2 3 4 5 6 7 8 9 etc. .................

or 1 2 3 4 5 6 1 2 3 4 5 6 etc. ..............

I

From these three formations the class may be quickly moved into position for calisthenics, grass drills, combatives, and other activities. When the whistle blows to fall in the instructor may indicate the formation desired by commanding "SQUAD FORMATION, FALL IN," or, "SINGLE LINE FORMATION, FALL IN." At the command "FALL IN," all pupils should immediately take their proper position facing the instructor. Always fall in at attention; this means without talking or moving around. This saves time and confusion.
The two methods explained below are convenient for getting the class in open order from the squad formation.

1. The squad on the left of the instructor is the base squad (number 1 squad). The remaining squads should fall in at arm’s interval from the squad on its right. This interval is obtained by extending the right arm laterally, palm down, at shoulder height and shifting position until the finger tips just brush the shoulder of the man on the right. Arms are dropped as soon as interval is obtained. Interval from front to rear is obtained by extending the left arm forward at shoulder height and shifting position until the fingertips of the left hand just brush the shoulder of the man in front. Both intervals are taken simultaneously. The open order is obtained by two movements from the dressed position described above.

a. **FORWARD MARCH.** At the command MARCH, all pupils take a designated number of steps forward, stepping off with the left foot, as follows: number 1 takes 10 steps, 2, 8 steps, 3, 6 steps, 4, 4 steps, 5, 2 steps, and 6 stands fast.

b. **EXTEND TO THE LEFT, MARCH.** At the command MARCH, all squads, except the first squad which stands fast and raises the left arm only, raise both arms laterally and shift to the left so that there are intervals of arm length plus 12 inches between the extended finger tips.
of each pupil. Arms are dropped as soon as interval is obtained. Cover from front to rear. To reassemble in squad formation the movements are executed in reverse order by the commands: ASSEMBLE TO THE RIGHT (LEFT), MARCH, and CLOSE RANKS, MARCH. In closing ranks number one stands fast and rear files close up.

2. In this second method the squads are formed in the same manner as in 1 above. The first command is EXTEND TO THE LEFT, MARCH, executed as in b above. The second command is TO THE RIGHT (LEFT), UNCOVER. At the command UNCOVER all even numbers move in the indicated direction to the middle of the interval, thus forming new files of three. To reassemble in squad formation the command is ASSEMBLE TO THE RIGHT (LEFT), MARCH, and each pupil returns to his original position.

The Single Line Formation is seldom used when the class is organized into squads. It is convenient at the beginning of the term before squads are organized, or it may be used for several weeks or even a whole term before progressing on to the next formation. If it is used for an extended period, squads should be organized as soon as practicable. To get the class in open formation from formation in line the command is OPEN RANKS, MARCH. It must be previously determined how many ranks you desire in the open formation, or how many ranks the floor space will permit. With ample space available, as in out-door classes, it is well to keep the squads intact and open to 6 ranks thus: at the command MARCH, all except the
number sixes step off with the left foot, the number ones moving forward 10 paces, twos, 8 paces, threes, 6 paces, fours, 4 paces, fives, 2 paces.

Where the class is habitually held in the same limited area the two-pace interval is good SOP (standing operating procedure). To vary the procedure the class may be required to COUNT OFF by number according to the number of ranks desired, i.e., count off by threes if three ranks are desired, fours for four ranks, or five for five. If it is desired to vary the interval between ranks, the command may be given as AT THREE (FOUR, FIVE) PACE INTERVAL, OPEN RANKS, MARCH. In this movement the number ones step off at the command MARCH, with twos following at three paces, threes following twos at three paces and so on. The instructor should command CLASS MARCH when the proper interval between all ranks has been obtained or the class moved to the desired position.

In order to achieve learning progression it may be well to use the formations described above in rotation, selecting one to start the year and changing to another after a six or twelve week period. Many variations of these formations may be adopted by the instructor to suit the activity and space. In any case SOP should be adopted for all normal formations and movements so that students learn them quickly; commands should always be given in the same order and manner; pupils should always fall in in the same relative position and keep the same number; places normally filled by a specific individual should be left vacant when he is absent; movement and talking in formation should be reduced to an absolute minimum except during temporary breaks or rest periods between exercises when the command AT EASE, or AT REST may be given. Class should
always be called to attention by whistle or voice command before activity is resumed following such periods.

Section II. Teaching Techniques

Personal Preparation of the Instructor. It is important that pupils be under the leadership only of trained teachers; thus the physical education instructor should have at least a minor and preferably a major in physical education in his college program. A minimum background should include courses in Principles, Organization, and Administration of Health and Physical Education; Theory and Practice of Physical Education including games of low organization, stunts, some apparatus, some tumbling, swimming, rhythmics, recreational activities, etc., as well as athletics; Theory and Practice in coaching intramural and interscholastic sports including football, basketball, track, baseball, softball, soccer, speedball, tennis, golf, volleyball, hockey, Health Education, including Teaching of Health, and School Health Problems.

Personal daily preparation of the instructor involves two major problems: What to Teach, and How to Teach It. The solution to these problems is most easily achieved through careful lesson planning. This

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Phase of teaching will be discussed in the following chapter. Thorough knowledge of subject matter, objectives sought, familiarity with the learning process, and good teaching technique is necessary to good instruction.

Teaching Fundamentals. Why do teachers differ in teaching ability and success in teaching? The two main reasons are probably difference in knowledge of subject matter and difference in personality. Of the two, the difference in personality is probably the most important reason. Other reasons are differences in experience, methods, and disciplinary ability.

Personality is the sum-total of those intangible characteristics of an individual that attract or repel other individuals; that causes the individual to be liked or disliked. This is important because the pupil is very apt to feel toward the subject or activity very much the same as he feels toward the teacher. It is obvious that thorough knowledge of the subject matter is indispensable to good teaching.

Discipline of the right sort is indispensable to good teaching and learning because disorder lessens attention. Disciplinary methods today have come to be a matter of enlisting the interest of the student in the activity to gain participation, rather than trying to force or terrify him into it; it is a matter of leading rather than driving. In this sense discipline is a method or technique in teaching. The following hints in maintaining discipline may be of assistance:

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1. Motivation: lead the students into wanting to learn; individual disciplinary problems will then often be solved by social pressure from the other students.

2. Develop pride in good behavior.

3. Thorough preparation and planning for activities aide in maintaining discipline through student interest.

4. Lead students to establish their own disciplinary measures.

5. Teach self-control.

6. Meet the first challenge firmly; win your first clash and your discipline problems will be well-in-hand from then on.

7. Judicious use of criticism and commendation will gain respect and confidence, thereby lessening your problems.

8. Use a whistle to secure attention; it is much more commanding than voice.

9. Have a good sense of humor.

10. Avoid abusive and profane language.

11. When in doubt about a situation KEEP QUIET.

12. Don't keep the pupils too long on one activity; they will lose interest and become restless. Keep the program moving.

13. Periods should not exceed 60 minutes of diversified activity.

14. Smaller classes offer less problems than large ones; should not exceed 40 and preferably should be held under 30 pupils.

15. Keep a firm hand on locker room management; many discipline problems stem from locker-room horse play.

16. Head off trouble before it starts; anticipate troublesome situations by thorough planning, complete preparation, and intelligent guidance. (Positive discipline).

17. Punishment after the offense (negative discipline) should include counseling and guidance as well as correction.

18. Avoid group punishment.
Experience is valuable to effective teaching if it gives the teacher confidence, wider knowledge of the subject, and better use of methods. The greatest danger resulting from long experience is carelessness; one is apt to get into a rut and become stereotyped. Avoid inflexible routines. Keep up with new developments in the field by reading good periodicals and recent books in the field; occasionally review some of the older material. Take an active part in professional associations.

It has been said that much teaching is merely a process of passing information from the instructor's notebook to the student's notebook without going through the head of either. It must be remembered that skill is acquired in physical activities by actual participation; that all learning takes place as the result of the activity of the learner; that we "learn to do by doing!" that practically no learning takes place by absorption; that learning takes place most effectively when pupils are interested and actually trying to learn; that people retain approximately 1/10 of what they HEAR, 5/10 of what they SEE, but 9/10 of what they DO.

Some fundamentals of instruction in physical education that have been found useful are:

1. Application of common sense.
2. Plenty of drive, energy, force.
3. Make instruction a sporting proposition.
4. Develop some competition through games, tests, etc.
5. Challenge their ability to do something; encourage them to show you they can do it.
6. Keep students from getting into a negative frame of mind.
7. Use novel ideas; they get results.
9. Organize the units of instruction so as to secure:
   a. Repetition with time breaks and different approaches (eggs fried, boiled, scrambled, breakfast, dinner, and supper).
   b. Variety (green beans, wax beans, celery and spinach all have vitamins but sure taste different).
   c. Contrast (formal, informal; part and whole)
   d. Climax (games, tournaments, testing).
9. Proceed from the known to the unknown; from the simple to the complex; from the beginning up to date.
10. Use all 5 senses possible to form an image (see a skunk and forget; see and smell and you will remember a long time; see, touch, and smell and you will never forget).
11. Create an image in your mind of what you want to teach; transmit this image to the mind of the pupil; make the image stick in the student’s mind.
12. Six steps in teaching:
   a. Preparation by the instructor.
   b. Explanation.
   c. Demonstration.
   e. Discussion.
   f. Examination or critique.
13. Tests:
   a. Purpose: to impress important points on the student; to test the efficiency of instruction; to test student efficiency and achievement; to fix the material in the student’s mind; to stimulate interest.
b. Essential qualities of a test: must be fair, clear, comprehensive, and capable of definite evaluation.

14. Discussion or critique: analysis by instructor and members of the group; self-analysis by the learner; conclusions and recommendations.

**Developing Sportsmanship.** Sportsmanship is the action or behavior of an individual arising out of competitive situations; it is usually thought of as being either good or bad. Good sportsmanship is not developed or acquired in a short period but is a continuing process throughout a lifetime. Although it defies specific definition it is generally thought of in terms of the following elements:⁵

1. Playing to win.
2. Keeping the rules.
3. Playing the game for love of the game.
4. Being fair in your conduct toward others.
5. Being courteous.
7. Having respect for others.
8. Controlling one's emotions, particularly temper.
9. Being a good loser and a modest and gracious winner.
10. Never offering alibis or excuses.
11. Being unselfish and not seeking personal glory.
12. Instinctively paying tribute to excellence of play of others.
13. Keeping fit for activities.
14. Doing unto others as you would have done unto yourself.

Some ways of developing sportsmanship include:

1. Setting good examples. Impartial officiating is such an example.
2. Direct teaching:
   a. Teach the rules thoroughly.
   b. Emphasize staying within the rules; show the tie-up with life.
   c. The real satisfaction comes from winning by playing within the rules.
   d. Compliment good play and sportsmanship on the part of friend and foe alike.
   e. Remove players for poor sportsmanship.

3. In general school activities:
   a. Emphasize sportsmanship in all school activities.
   b. Dramatize sportsmanship; point out examples.
   c. Don’t let competition get too high or heated.
   d. Develop a code of sportsmanship for the school.

Developing Citizenship. It is generally agreed by students of social problems that physical education can make definite contributions toward the social development of groups and individuals. The fact that recreation is a fundamental human need tends to place more emphasis on the recreational aspects of physical education and on the opportunities it offers for the worthy use of leisure time. With the ever-increasing amount of leisure time due to technological developments, shorter work days, and paid vacations the citizenship aspect of physical education becomes more important. Particular attention should be given to teaching games that can be played by small groups or individuals as recreational activities throughout their lifetime. It is also important in physical activities to emphasize the importance of courteous consideration for the rights of others. More emphasis needs to be placed on the individual’s duty to others and less on his individual rights. Pupils must be taught to “take it” as well as “dish it out;” they must learn to play and work together in keeping with the American definition of democracy.

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Teaching Leadership and Followership. Leadership arises out of a group need. There is no way to know what traits of leadership are inherited and what are developed through environment. It is possible, however, to develop traits of leadership by providing opportunities to bring those qualities out in the individual. The use of the squad system in class organization offers a fine opportunity to give all pupils a chance to develop leadership. At first the instructor will probably have to appoint the leaders; later the pupils themselves will recognize those individuals with leadership and will select them to head activity groups.

Teaching leadership may be done by setting up situations calling for leadership, with opportunity for all students to recognize a situation and try to arrive at a solution. For example, question the squad or group on what measures may be taken to speed up assembly and organization for games; or best methods for going to and from play areas and dressing rooms; or policing the locker and shower rooms. Teacher and pupils analyze previous situations to show necessity for leadership and followership (if we have leaders we must necessarily have followers). It is quite obvious that all members of the group cannot be leaders at the same time. It is equally obvious that leadership and followership may both be taught from the same situation. Leadership, followership, and citizenship are inseparable factors in our democratic way of life and every opportunity should be taken to develop them.

CHAPTER V

SPECIFIC ACTIVITIES AND TEACHING SUGGESTIONS

Criteria for Selecting Activities. The activities of the physical education program should be selected in the light of the needs, abilities, and interests of the students. Other important considerations are time allotment, facilities, climatic conditions, teacher and pupil abilities, and even community custom and prejudices.

The following general criteria for the selection of activities are in keeping with the general objectives outlined in a previous chapter:

1. Select those activities which are feasible in the school from the standpoint of facilities, teacher and pupil abilities.

2. Activities should be selected in accordance with relative values. Activities that will make the greatest contribution to the greatest number of pupils should receive more emphasis than those with lesser contributions.

3. Activities must be meaningful and purposeful if the pupils are expected to enter into them wholeheartedly.

4. Activities should be progressive; lead on to further activities.

5. Activities should have a carry-over value both from the participant and spectator standpoint.

6. Activities of interest to the pupil will bring about greater development than those in which there is lack of interest. Be sure that lack of interest is not due to unfamiliarity rather than actual dislike.


2 Physical Education, State of Indiana Department of Public Instruction Bulletin No. 126, 1940, pp 17-18.
7. Activities must be within the capacity of the pupils according to age and strength.

8. Intensive treatment of a limited number of carefully selected activities is better than a brief treatment of a large number none of which will be mastered.

9. Activities should provide leadership and followership opportunities in a social situation rather than a teacher dominated formalized program.

The general criteria may be further broken down into specific considerations of physical, psychological, intellectual, and social development of the participant as follows:

1. Physical development: The Activity
   a. Must contribute to the growth, functioning, and development of the physical being.
   b. Should involve large muscle groups
   c. Must be vigorous enough to develop strength but not over-tax
   d. Should provide for both indoor and outdoor participation.
   e. Should provide opportunity to work off internal secretions aroused by emotions (stimulate circulation, respiration and elimination).
   f. Should provide for reciprocal enervation (use of opposing muscles in harmony).
   g. Should provide for individual variations in ability and capacity.
   h. Should contribute to safety skills (how to fall without getting hurt etc.)
   i. Should develop special senses within the body (judging speed distance, timing, ability to handle the body.)

2. Psychological and Intellectual development:
   a. Activities should be predominantly play activities.
   b. Must have meaning and purpose.
   c. Must fit the psychological age of the individual. (their likes and interests)
   d. Must be adapted to the laws of learning (readiness to learn etc.).
   e. Must lead up to further activity.
   f. Should be treated with intensity; don’t just give it a lick and a promise.
   g. Should provide opportunity to learn rules and techniques in order to stimulate thinking.
3. Social and personal development:
   a. Should provide opportunity to development of citizenship in a democracy
   b. Should be suitable for present social conditions and look forward to future social development.
   c. Should be rich in character training.
   d. Should contribute to wise use of leisure time.

Organization of Activities into the Program. After the activities have been selected it will be necessary to organize them into a sound program schedule. The following criteria for organization may prove helpful:

1. Progression from the simple to the more complex or difficult. Limiting or extending time for activities, increasing or decreasing repetitions or standards of achievement to suit individual abilities are means for attaining progression.

2. Variety is conducive to interest and essential to the attainment of all-around ability. Programs consisting solely of basketball and a few calisthenics, or touch football, basketball and softball are examples of inadequate variety.

3. Seasonality makes for better variety, utilizes current interests and makes for the best use of facilities. Spending three-fourths of the time on basketball or out-of-season sports is a violation of this principle. Keeping classes indoors on sunny fall and spring days is another violation.

4. Practice for mastery requires that essential activities be repeated sufficiently to assure learning. Such practice may be over a period of years and can be supplemented by lead-up games.

5. Activities should be feasible for the school system. At Central High School no outdoor play areas are available so fall and spring indoor activities must be substituted for those normally held out of doors. Further, the program should be so organized that inclement weather periods may be held inside during normal out-door seasons.

3 ibid., pp 18-19.
6. Unity of result, effort, and methodology are fostered when fundamental or individual athletic events correspond to the nature of seasonal sports. First aid, safety, and health instruction, may be tied in with such activities as apparatus, swimming, and other associated physical education activities.

Classification of Activities. Physical education activities may be classified under the following general headings:

I. Physical Activities.

1. Team sports: football, touch football, soccer, speedball, basketball, volleyball, and softball.

2. Individual sports (including recreational games): track and field, boxing, table tennis, badminton, shuffleboard, tether ball, horse shoe, handball, box hockey, tennis, and golf.


4. Rhythmics: athletic dancing, clog and tap dancing, folk dancing, social dancing, and fundamental rhythms.

5. Mass games: games of low organization such as dodge ball, relays, and other lead-up games for volleyball, basketball, and football.

6. Formalized: calisthenics and marching.

7. Restricted and remedial: Corrective exercises, adapted sports, and nutrition work.

8. Self-testing: apparatus, stunts, individual sports, and tumbling.

II. Related Activities.

1. Administrative: general instructions, leadership training, locker and shower room administration, class organization, roll call, testing, and keeping records.

2. Hygienic: dressing, inspections, hygiene instruction, and showers.

In scanning the field of literature on physical education there appears to be as many different classifications of activities as there
are writers. The above classification assembled by the writer from the work of several leaders in the field appears to account for all the time devoted to physical education and is considered adequate. There are many other specific activities that might be listed under some of the above headings, but only those feasible under local conditions have been indicated as examples. Samples of classifications by other writers will be found in the appendix.

Specific Activities by Grades. No attempt will be made in this work to set up a specific course of study to be followed to the letter. This has been done in some states and large school systems but it has been found that there must be considerable elasticity in any established program to allow for differences in facilities, teacher training, and other variables. Accordingly the following programs of activities are suggested as a guide from which the instructor may plan his program on a yearly, monthly, or weekly basis. The program for the junior high level is an adaptation of a program offered by LaForte based on the results of nineteen years of research by the Committee on Curriculum Research of the College Physical Education Association. The senior high program has been worked out through the cooperation of administrators and physical education instructors of Central High School based on actual use and experiment. Other programs of activities as outlined in courses of study from other states and schools of similar size will be found in the appendix.

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The time allotments in Table I are approximate and subject to adjustment. It is advisable for class periods in team sports to be scheduled during the normal playing season since interest in that sport will be at its highest peak during that period. Various activities listed may be concentrated in one year during a specific number of weeks or it may be split between two or three years according to the preference of the department. It is obvious from the number of weeks allotted that basketball and volleyball will be scheduled each year. This is logical due to the local limitations of facilities. It is suggested further, that part of the rhythmic activities may be combined with corresponding girls classes. Classes in the team games will naturally be conducted on an elementary level, using relays, mass games, and lead-up games involving the same elements. The last fifteen minutes of each period may well be used in playing abbreviated games under the official rules. This will stimulate enthusiastic participation in all phases of instruction in the activity or game.

The program for senior high may follow along similar lines. Table II illustrates a similar program for senior high broken down into specific activities by season. The program listed in Table I might be treated in the same manner.

Calisthenics have a definite part in the program of activities for two reasons: First, they may help prevent postural conditions which children often acquire their school years. Second, they are excellent for conditioning and strengthening pupils for vigorous activities, games,
and sports. This type of work is also used to correct or improve postural maladjustments especially as related to the curve of the spine, but its greatest value is in general muscular conditioning. The general objectives may be summed up as follows:

1. Strengthening weak muscles and muscle groups.
2. Stretching shortened muscles.
3. Suppling stiff joints by stretching muscles and ligaments.
4. Relaxing tense muscle groups.
5. Developing good body mechanics.
6. Developing body control and suppleness.

The calisthenic period should not exceed eight to ten minutes for senior high groups and will generally be less. In making out a routine remember to use exercises involving large muscle groups (trunk and leg) rather than just small groups, repeat the exercise until definite muscular and organic effect is noticed. Exercise rhythmically. The routine should provide exercise for all muscle groups. Special routines adapted to the demands of the activity should be used in conditioning for football, basketball, track and other games.

Lack of outdoor play areas and the limited indoor floor space forces a restricted program of class activities in the physical education program at Central. Table II is a suggested yearly program for physical activities covering the three phases of organised class work, intramural sports, and interscholastic athletics. It will be noted that the activities in the required program are offered in units of from two to seven weeks duration. This division of time is elastic and may be adjusted to the needs of any group or the restrictions of any given time period. It is suggested that some of the activities listed under individual sports and contests, and apparatus and mat work, be carried
# TABLE I

**PHYSICAL EDUCATION PROGRAM (Grades 7-9)**

<table>
<thead>
<tr>
<th>Team Sports</th>
<th>Individual Sports &amp; Contests</th>
<th>Apparatus &amp; Mat Work</th>
<th>Calisthenics</th>
<th>Intramural &amp; Inter-scholastic Sports Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALL</strong></td>
<td>Touch football 12 weeks</td>
<td>Tumbling</td>
<td>Review fundamentals</td>
<td>Touch football</td>
</tr>
<tr>
<td></td>
<td>Soccer or Speedball-6 weeks</td>
<td>Pyramids 6 weeks</td>
<td>Positions.</td>
<td>Horseshoe</td>
</tr>
<tr>
<td></td>
<td>Boxing 3 weeks unit</td>
<td></td>
<td>Daily Routines 3-6 minutes</td>
<td>Soccer or Speedball</td>
</tr>
<tr>
<td></td>
<td>Dual contests</td>
<td></td>
<td></td>
<td>Volleyball</td>
</tr>
<tr>
<td><strong>WINTER</strong></td>
<td>Rhythms - 6 weeks</td>
<td>Stunts - 5 weeks</td>
<td>Daily Routines 3-6 minutes</td>
<td>Basketball</td>
</tr>
<tr>
<td></td>
<td>Basketball 24 weeks</td>
<td></td>
<td></td>
<td>Paddle Tennis</td>
</tr>
<tr>
<td></td>
<td>Volleyball 18 weeks</td>
<td></td>
<td></td>
<td>Winter Sports</td>
</tr>
<tr>
<td><strong>SPRING</strong></td>
<td>Track &amp; Field 6 weeks</td>
<td>Apparatus - 5 weeks</td>
<td>Daily Routines 3-6 minutes</td>
<td>Track &amp; Field</td>
</tr>
<tr>
<td></td>
<td>Softball - 6 weeks</td>
<td></td>
<td></td>
<td>Softball</td>
</tr>
<tr>
<td></td>
<td>Mass games</td>
<td></td>
<td></td>
<td>Tennis</td>
</tr>
<tr>
<td></td>
<td>Badminton - 2 week unit</td>
<td></td>
<td></td>
<td>Basketball</td>
</tr>
</tbody>
</table>

**Notes:**

- Mason & Mitchell, "Active Games & Contests."
- S. C. Staley, "Games, Contests & Relays."
- S. C. Staley, "Individual & Mass Athletics."
- S. C. Staley, "Calisthenics."
- Lavesga "Volley Ball."
- J. H. McCulloch, "Gymnastics, Tumbling & Pyramids."
- Bresnahan & Tuttle, "Track & Field Athletics."
- U. S. Naval Institute Physical Training Manuals.

**NOTE:** This program is made up on a 3-year basis or a total of 94 weeks in the core program, allowing 14 weeks for electives.
<table>
<thead>
<tr>
<th>Semester</th>
<th>Team Sports</th>
<th>Individual Sports &amp; Contests</th>
<th>Apparatus &amp; Nat Work</th>
<th>Calisthenics</th>
<th>Intramural &amp; Inter-scholastic Sports Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
<td>Indoor Soccer 6 weeks unit</td>
<td>Boxing, 3 weeks unit Dual contests</td>
<td>Mat work Pyramids Self-testing stunts 2 week unit</td>
<td>Review fundamentals Positions: Daily Routines 5-8 minutes</td>
<td>Touch football or soccer Tennis Golf Basketball</td>
</tr>
<tr>
<td>WINTER</td>
<td>Basketball 7 week unit</td>
<td>Dual contests</td>
<td>Daily Routines 5-8 minutes</td>
<td>Basketball Volleyball Hockey</td>
<td></td>
</tr>
<tr>
<td>SPRING</td>
<td>Indoor Ball</td>
<td>Wrestling 2 week unit Badminton 2 week unit</td>
<td>Apparatus Horse Bars Rings Hopes 2 week unit</td>
<td>Daily Routines 5-8 minutes</td>
<td>Basketball Tennis Golf Softball Track &amp; Field</td>
</tr>
</tbody>
</table>

References:
- Mason & Mitchell, "Active Games & Contests."
- S. C. Staley, "Games, Contests & Relays."
- S. C. Staley, "Individual & Mass Athletics."
- S. C. Staley, "Calisthenics."
- Lavesga "Volley Ball"
- J. H. McCulloch, "Gymnastics, Tumbling, & Pyramids."
- Bresnahan & Tuttle, "Track & Field Athletics."
- U. S. Naval Institute Physical Training Manuals.
on simultaneously. For example, using the squad system, one squad can be doing mat work, another dual contests, a third working on badminton. Any number of such combinations may be worked out by the instructor.

Lesson Plans. Teachers have two big problems in preparing for a class: What to teach, and how to teach it. The best preparation for any specific class period results from long range planning. Take for example a new teacher just assigned to teach boy's physical education in Central High School. After familiarizing himself with the physical plant, class schedules etc. It would be a good idea to work out a program for the entire year. Such a program would include all the activities to be taught in his classes for the entire nine months. This has been done in Table II. Next, he should plan each unit on the basis of time allotted to it. Some instructors will break the unit down into weekly plans while others will break it down into daily lesson plans. How detailed the plan should be depends on the experience and skill of the teacher. In any case the planning should be thorough and complete in order to avoid waste of time, and to insure good continuity in instruction write it down.

The unit plan should be built upon the following considerations:

1. Introduction to the activity; something of its history and its place in the program.
2. Objectives; what you want the pupils to learn; benefits you want them to realise.
3. Motivating devices; methods of arousing pupil interest.
4. Skills and techniques; fundamentals and lead-up games; learning of the "whole".
5. Skill tests; achievement tests; knowledge tests.
6. Games and tournaments.

7. Evaluation of outcomes; tests, measurements, and grades.

Voltmer and Esslinger state that in planning the lesson, the instructor should include those activities and techniques which will provide a positive answer to the following questions:

1. Does the entire lesson constitute a healthful procedure.
   a. Is the area clean and sanitary?
   b. Is the temperature and ventilation satisfactory?
   c. Are pupils properly dressed for the activities?
   d. Are all pupils given a chance for stimulating exercise?
   e. Are adequate safety measures provided?
   f. Are none worked too hard or too long?

2. Does the activity fit the facilities?
   a. Is there enough space?
   b. Are adequate supplies and equipment available?
   c. Are the playing surfaces satisfactory?

3. Is the plan educationally sound?
   a. Is it interesting?
   b. Is it seasonal?
   c. Is it graded to the level of the pupils?
   d. Does it provide participation for all pupils for most of the period?
   e. Are the pupils familiar with the rules and techniques of the activities?
   f. Does it fit in good sequence with the preceding period and the one that is to follow?
   g. Does it provide leadership and followership opportunities?
   h. Can the pupils move from one part of the program to another with a minimum of rearrangement of equipment and groups?

Good lesson planning is probably the best way to build up a definite course of study. By writing down the plan, evaluating it after the class is over, and checking pupil progress from time to time, you can easily

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make corrections to eliminate weak spots, and add things that may have been overlooked. However, one must guard against merely filing the plan away to be used again without further study or consideration. To build up a good course through the use of lesson plans they must be kept up to date; get rid of dead material and add new. A brief critique with the squad leaders can be of great assistance in eliminating bad features and improving lesson plans; never lose sight of the pupil point of view.

The advantages of lesson planning may be briefly summed up as follows:

1. Gives good sequence to instruction.
2. Eliminates waste time, slack, and confusion during the class period.
3. Provides a definite check on pupil progress.
4. Enables you to keep the program up to date.
5. Helps to avoid over-emphasis on certain activities.
6. Insures consideration of the health and safety factors.
7. Makes for more active adaptation to pupil needs and interests.
8. Protects against omissions and errors.

In making out the lesson plan consideration must be given to the method of instruction. Will the part or the whole method be used. Some teachers favor one, some the other. In physical education a combination of both methods is probably the most satisfactory. For example, in teaching basketball it is desirable to teach the fundamentals first, then put them together and play the game. This does not mean that the pupil will first become expert in the fundamentals; nor does it mean that he will learn all the fundamentals before he starts to play the game. The writer has experimented over several years of coaching basketball, with various methods of teaching fundamentals. It was found that a good game could be
played without the use of the dribble; but it is quite obvious that the
game cannot be played without passing and shooting. It is logical then,
to suppose that basketball might be taught by first learning the essential
fundamentals (parts), then combining them into the game (whole). The
sequence would probably be ball-handling (catching, passing, and shooting),
rules, defense, offense, and team work, all of which are necessary to
really play a game. Other fundamentals will follow as proficiency in the
basics increase. In teaching fundamentals the whole method may be used
through the medium of lead-up games such as passing relays, shooting games,
dribbling games etc. It is good teaching method, however, to allow the
pupils to play the game for a short period during each class in order to
stimulate and maintain interest. They will learn the value of fundamental
skills by making mistakes; they will then be more interested in working
on the fundamentals in order to improve their play in the game. As pro-
ficiency in fundamentals increases more time will be allowed for games;
thus in the 7th grade most of the time would be spent on fundamental
skills and lead-up games, while the opposite will be true in the 12th
grade.

An effective plan for teaching basketball skills in any given class
may be outlined as follows:

1. Review and practice fundamentals learned in the preceding class.
2. Describe and demonstrate the new fundamentals for the day,
   being sure to stress their importance to the game as a whole.
3. Practice the new skill individually, using mass tactics (using
   several balls with three or four boys to a ball, taking turns
dribbling, passing, shooting, etc.)
5. Put the new skills and the old ones together in a game.

One can hardly over-emphasize the importance of coordinated instruction in teaching physical activities. Using the basketball example again, the instructor should teach rules governing the dribble while teaching the technique of the dribble. At the same time he will bring out the strategic purpose of the dribble in the pattern of play. He will also gradually add such elements as personal social conduct in the game, ethical standards, safety factors, leadership, followership, and the carry-over factors that can be tied in to adult life situations. All of these factors, and probably many others will be brought out clearly through thorough lesson planning.

Each teacher will develop his own form of lesson plan and will include detail to the extent commensurate with his experience and knowledge of the activity. A detailed lesson plan for a volleyball class is illustrated below.

Lesson No. 2  Grade 7  Period 5  Date 10 March 47

General Objectives: To develop neuro-muscular coordination in serving a volleyball, to increase the individual’s fund of hygienic habits and knowledge, and to furnish adequate opportunities for leadership.

Specific Objectives:
1. To serve a volleyball skillfully and effectively.
2. To furnish opportunities for leadership.

Mason and Mitchell, Active Games and Contests, p 65.
<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>MATERIALS</th>
<th>TIME</th>
<th>METHODS AND PROCEDURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dressing</td>
<td>1. Volley ball court in gym.</td>
<td>7&quot;</td>
<td>1. Have material ready so that skillful students may begin serving before class starts.</td>
</tr>
<tr>
<td></td>
<td>3. One volley ball for every 5 pupils.</td>
<td>2&quot;</td>
<td>3. Stress that points may be scored only on effective serve.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Demonstrate to class various methods of serving:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. Assume a stride position with left foot toward net.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. Hold ball in left hand about 18 inches in front of right hip.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>c. Use a long stroke of the right hand, starting well to rear, sweeping ball off left hand over net. Ball is struck with palm of hand and right arm follows through well beyond point of contact with ball. As stroke is finished, shift weight from right to left foot and be ready to play the ball. Left-handers use reverse procedure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>d. The serve may also be made by using open palm side-arm, open palm over-hand partly closed hand, heel and knuckles of hand, closed hand, and knuckles and back of hand.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20&quot;</td>
<td>5. Use squads of 3 or 4 members with leaders in charge. Three serving lines to each net may receive from opposite side of net. Leaders instruct.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6. Each player makes 5 serves, getting 10 points for a good serve. Keep score. Repeat. No score if ball hits net or goes out of bounds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15&quot;</td>
<td>7. Supervise showers; leaders post scores.</td>
</tr>
</tbody>
</table>
The Restricted and Remedial Program. Very little has been done in the past in remedial work at Central High School, or in providing a program of activities suited to those suited to those students having physical conditions preventing their participation in vigorous physical activities. This is a deplorable condition, and one that might be remedied if proper use were made of existing facilities. Three requisites for a successful program are capable instructors, suitable space and facilities, and proper time allotment. There have been and are capable instructors available, and space is available, but is being used for other activities. The time element could easily be adjusted. The school is society's chief instrument for translating any student liabilities into assets. A student that is maladjusted is an indication that some one has failed to provide him an opportunity to succeed on his own level of ability. The responsibility of the school in regard to students with physical handicaps is well stated in the "Bill of Rights for Physically Handicapped Students" which states that: "The physically handicapped student has a right

1. To as vigorous a body as human skill can give him.
2. To an education so adapted to his handicap that he can be economically independent and have a chance for the fullest life of which he is capable.
3. To be brought up and educated by those who understand the nature of the burden he has to bear and who consider it a privilege to help him bear it.
4. To grow up in a world which does not set him apart, which looks at him, not with scorn or pity or ridicule - but which welcomes him, exactly as it welcomes any other student, which offer him identical privileges and identical responsibilities.

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8 White House Conference on Child Health and Protection
5. To a life on which his handicap casts no shadow, but which is full day by day with those things, which make it worthwhile, with comradeship, love, work, play, laughter and tears—a life in which these things bring continually increasing growth, richness, release of energies, joy in achievement.

Most writers in the field of physical education agree that there should be one hundred per cent student participation in the activity program. This ideal can be reached only through the restricted and corrective program. The restricted activity program calls for recreational activities within the limitations of the defects, while the corrective program calls for specific therapy aimed at the correction of the existing defect. These programs should answer the question of what to do about students unfit for the normal vigorous program. There should be something in every program of physical education for every boy and girl.

The objectives for restricted and remedial programs may be briefly outlined as follows:

I. The Restricted Activity Program

1. To establish a feeling of competency in the physically handicapped.
2. To furnish opportunity to perfect skill in recreational activities in keeping with the limits of the defect and which may be engaged in throughout life.
3. To acquaint the student with the nature of his defect, and assist him in every way to compensate for it.
4. To secure what correction a restricted program may automatically bring.

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II. The Corrective Program

1. To bring an understanding to all students concerning the cause, nature, and prognosis of all defects.
2. To improve the specific defect of the student.
3. To prevent existing defects from becoming worse.
4. To offer opportunities for prolonged treatment of certain defects wherever necessary.

In forming a program of activities for the restricted and remedial cases close liaison with the physician and nurse is necessary. It is good public relations to acquaint the local physicians with the entire physical education program, either through personal contact or a short talk at one of their association meetings. It is well first to make a list of activities classified according to relative strength and endurance required in participation. This list may then be made a part of the health examination form (see appendix I) or sent with the form to the physician making the examination. The physician can then check the activities in which he feels the student may safely participate. It is then the duty of the instructor to see that student participation is held within the limits of safety; that he does not over-tax his strength; that periodic check-ups are made to determine the student’s progress; that the cooperation of other students, teachers, and parents are secured in seeking health improvement for the individual; that all cases are treated individually; that the student is not made self-conscious but is directed toward sound social adjustment and good mental attitude.

Elaborate or extensive facilities are not essential for a good restricted and remedial program. Most of the cases will be able to take part in regular physical education classes on a restricted basis. They
will be able to do some calisthenics, some light apparatus work, and
day some games. Those not able to take an active part in regular classes
will be limited in number. In the school year 1946-47 there were only
16 boys in Central High School who were unable to participate in regular
physical education classes because of permanent or extended physical
disabilities. That is approximately 3% of the total boys enrolled. The
number of physically handicapped girls will run a bit higher. It is
evident, then, that these restricted cases, both boys and girls could
be accommodated in no more than six or eight periods per week. There
were only two cases demanding orthopedic remedial treatment among the
boys, and both of those cases could have participated in mild physical
activities of a recreational nature. It is possible, and even desirable,
that some co-educational periods be arranged for activities of a recrea-
tional nature such as social dancing, folk dancing, clogging, shuffle
board, table tennis, dart games, bean bag games, archery, and many others.

Due to the large number of boys that must be assigned to regular
physical education classes it is impossible to hold restricted classes
in the gymnasium during regular school hours. It is recommended, there-
fore that regular periods for the restricted group be arranged in the
recreation room in the basement of the auditorium. At the time this is
written that space is being used for music and motion pictures for small
groups. In view of the obligation of the school to its handicapped
students it is felt that an adjustment could be made between departments
so that the only suitable space available for a restricted program could
to put into such service. Some table tennis tables, shuffle board courts, dart boards, archery equipment, punching bags and other suitable and inexpensive equipment could be installed in the recreation room in such a manner as not to interfere in any way with other activities normally held there.

In scheduling classes for the restricted and remedial cases it is advisable to assign them to their physical education period and build the rest of the schedule around it. By so doing classes may be scheduled in such manner as to least interfere with other activities held in the recreation room. A suggested schedule is offered as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Good.</td>
</tr>
<tr>
<td>6</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Good.</td>
</tr>
</tbody>
</table>

Two periods are included in the above schedule in case it is advisable to separate groups or individuals because of age differences. Normally this will not be necessary because physical strength is not a factor. Work must necessarily be individual and adjusted to the handicapped.

**Testing and Measuring.** Many studies have been conducted and many are presently under way in an effort to develop adequate tests of performance skills; tests of knowledge or rules and strategy; tests of social attitudes; and tests of native ability and general capacity. Some studies of tests for various school levels are available in
published form. There is still considerable doubt as to the validity and practicability of most of these tests. Thus until proven standards are available, each instructor should attempt to work out practical tests that can be administered in a minimum of time, and cover the activities included in the program. Such tests will at least have the value of providing a means of relative grading and checking the progress of the students individually. They may also be of value in classifying students to facilitate grouping together those of comparatively the same physical ability; test the efficiency of instruction; motivation; and testing the knowledge of the students.

Types of tests that can be used to advantage in the program of the Grand Forks public schools include efficiency tests, achievement tests, and knowledge tests. Efficiency tests are often used as a basis for classifying students for the purpose of class assignment. However, since class assignment in the Grand Forks schools is primarily on a grade basis, the efficiency tests serve mainly as motivating devices, and tests of pupil progress.

Achievement tests, sometimes called sport skills tests, are required for marking, and also serve as important tools for guidance and motivation. Track and field events lend themselves to this type of test because achievement can be measured quite accurately. In this connection it must be remembered that equal amounts of increase at different levels of ability are not indicative of equal amounts of improvement. For example increasing the speed in the 100 yard dash from 11.0 seconds to 10.5 is


not as great an achievement as increasing it from 10.0 seconds to 9.8. In other words, the increase can be measured accurately, but the relative value of the increase is another matter. There are, at this writing, no reliable standardized tests of this nature. The Minnesota achievement tests are a step in the right direction and are valuable as a guide (see appendix).

Knowledge tests have a definite place in determining pupil progress and teacher efficiency. They measure knowledge of rules and techniques. They may be of the usual academic type, and may be either oral or written. The objective type test, using true-false, multiple-choice, and completion are the most popular. They should be short, and constructed to the grade level of the pupils being tested. Sample tests of this type will be found in the appendix.

Using the Minnesota Boy's Physical Efficiency Test Standards a series of tests were given at periodic intervals to three classes at Central high school during the spring semester of 1947. The results of those tests are offered as a guide to similar tests in the future (Table III). In comparing the standards established in Table III with the original Minnesota standards (appendix V) it will be noted that the comparative scores at Central are lower. Seeking the reason for the difference the writer discussed the problem with several physical education instructors in Minnesota schools. It was found that without exception their results in actual use of the standards showed lower scores. It was agreed that there were probably two reasons for the difference: standards in the tests as published by the Minnesota Department of
<table>
<thead>
<tr>
<th>Age or Grade</th>
<th>Test Grade</th>
<th>Broad Jump</th>
<th>Vertical Jump</th>
<th>Push-up</th>
<th>Sit-up</th>
<th>Pull-up</th>
<th>Burpee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 12</td>
<td>D</td>
<td>4'6&quot;</td>
<td>10&quot;</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>5'0&quot;</td>
<td>12</td>
<td>3</td>
<td>20</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
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</table>

The Burpee is the 4-count squat-thrust for 30 seconds. The sit-up is the Army style with hands clasped behind the neck with the alternating elbow-to-knee trunk twist.
Education are too high, and the types of activities used in the test are not emphasised in our activities program. However, the test as used does offer a basis for comparative individual progress, and can be used in marking.

Marking in physical education has been discussed in some detail in Chapter 3. Samples of achievement tests and knowledge tests will be found in the appendix. It is recommended that in view of the limited time available to students for physical education activities in the Grand Forks city schools, testing programs be held to the minimum consistent with the objectives listed above.

Hints for Physical Education Instructors.

I. The course of study.

1. Be familiar with the principles and objectives of physical education.
2. Have a written lesson plan for each class made out in advance.
3. Keep these plans on file for at least a year.
4. Try to improve the content of the program from year to year.
5. Have adequate reference material and keep it up to date.

II. Methods:

1. Consider the physical education period as an educational period.
2. Make use of pupil leadership.
3. Divide the class into equalized squads.
4. Provide activities in accordance to age, grade, and ability.
5. Require different degrees of skill for each grade.
6. Use activities that will keep all the class active all the time.
7. Spend most of the time teaching fundamental skills, relays, self-testing, and lead-ups; about 20% in actual games employing all fundamental skills.
6. Use some simple efficiency, achievement, and knowledge tests, but don't take up more than 5% total time with them.

9. Keep a permanent record card for each pupil but don't bury yourself in bookkeeping details.

10. Don't grade merely on attendance and uniform; use some sort of comprehensive marking system in keeping with the objectives of physical education.

11. Consider improvement as well as ability when marking.

12. Roll call should consume less than a minute; announcements not more than another minute.

13. Watch for and provide for individual differences.

14. Include sports with good carry-over values.

15. Teach individual and dual as well as team sports.

16. Provide variety and balance in your program.

17. Give individual as well as group instruction.

18. Require all pupils to be properly dressed for class.

19. Use all the tricks of the trade to stimulate interest.

20. Try to give particular attention to restricted cases.

21. Encourage every student to have a physical examination once each year.

22. Keep a close check on general health conditions such as feet, skin, colds, and cleanliness of body and clothing.

23. Have a standard excuse form for the physician which states the specific defect and recommended activities, and estimated time for recovery.

III. Locker and Shower room:

1. Require a shower of each pupil after participation.

2. Teach them how to take shower.

3. Require clean towels for drying.

4. Require complete clean uniforms each week.

5. Check drains, bowls, soap dispensers etc. several times daily. Keep a check on the janitor.

6. Keep close supervision on shower and locker room; use squad leaders to help.

7. See that each pupil has an individual basket and locker.

8. Insist that baskets and lockers are kept locked with a good combination lock, and combination registered in the principal's office. Don't permit key locks.

9. Seven minutes is ample time to dress for class; ten minutes for shower and dressing after class.

10. Be sure the drinking fountains are working in the dressing room.
IV. Safety Education:

1. Teach safety in every class.
2. Be sure all activities are supervised, preferably by yourself.
3. Have first-aid materials always handy and know how to use them.
4. Keep boils and other skin infections out of the locker room and shower.
5. Don't let pupils use dangerous equipment without supervision.
6. Keep apparatus out of game areas when games are played.
7. Inspect ropes and other apparatus frequently.
8. Keep equipment properly stored when not in use.
9. Have mats under bars, horses, etc.
10. Keep mat covers and mats periodically.
11. Be sure all projections, corners etc. are padded.
12. Require pupils to wear non-making rubber soles; don't allow them on the floor in street shoes or clothes.
14. Watch the ventilation.

V. General:

1. Make out a budget for equipment on at least a three year basis.
2. Buy the best equipment; it is cheapest in the long run.
3. Keep an up-to-date inventory of all equipment.
4. Keep equipment in good repair; don't let damaged equipment stay in play.
5. Keep equipment locked up when not in use.
6. Use a card system for checking out equipment to pupils for use outside regular class periods.
7. Have one or two reliable pupils to help care for equipment; teach them how to inflate balls, put up nets, etc.
8. Make good use of bulletin boards.
9. Keep in touch with the public; if you have something good, advertise it. Good public relations are important.

Supervision of Practice Teachers. The aim of the supervising teacher is to assist the student teacher to discover, develop, and evaluate his potentialities as a teacher, and to guide him into
integration of subject matter, theory, and practice. This may be done through conferences with the student teacher, observation and participation in actual teaching by the student teacher, instructional planning by both student and supervisor, and evaluation by both.

The first conference with the student teacher is a get-acquainted meeting. He should be made to feel at home with the supervisor and in the school; let him know that there is a very definite interest in his success. He should be familiarized with school and department policies, and with the general plan to be followed during his practice teaching period. Later conferences should be arranged to deal with specific problems such as beginning a new unit of instruction, and to gather up loose ends at the end of a unit. Brief critiques may be held after each class session to discuss various items while they are fresh in the minds of both student and supervisor. In these conferences the supervisor must recognize the individual differences of the student teachers; they will not all progress at the same rate; some require longer periods of observation than others; some are bashful; some are over-aggressive. Use these conferences to become intimately acquainted with the student so that you can adjust the program to his needs and capabilities. It should be a case of working, thinking, and sharing together in a common problem. Encourage him to freely express his problems. In general, these conferences may be considered as shock-absorbers for the student teacher in meeting his new situation.

The plan for the student teacher's program may be conveniently divided into two parts: a period of observation, and a period of participation. During the period of observation the student watches the administration, the school, the class, and the supervisor in action. He should become familiar with both school and department administrative policies and see how the physical education program fits into the over-all educational program of the school. He should meet the principal and superintendent of schools, and be invited to attend any staff meetings where general policies are discussed. He should become acquainted with responsibilities relating to facilities and equipment, class management and routine, and office administration. He should be given an opportunity to observe good methods and technique in teaching physical education. This may be considered the "explanation" phase of instruction in which the supervisor explains what he is going to teach, and the "demonstration" phase in which he shows him how to teach it. It is well for the supervisor and student teacher to work out the first few lesson plans together so that both will have the same understanding of the objectives and methods involved.

The period of participation affords the student teacher an opportunity to actually take over the instruction of the class. The supervisor becomes the observer with the chief duty of evaluating the work of the student teacher and guiding him in the development of skill in teaching. In evaluating the work of the student teacher the supervisor should keep in mind that he will very likely be called upon to furnish recommendations and estimates of the student when he starts applying for jobs. A check list of teaching qualifications is helpful in making an accurate evaluation.
of the skill and aptitude of the student teacher; similarly, the student teacher will find a check list helpful for use in self-evaluation.

Samples of such check-lists are listed below.

CHECK-LIST FOR SELF EVALUATION FOR STUDENT TEACHERS IN PHYSICAL EDUCATION

1. PERSONAL EQUIPMENT:
   - Is my posture the type one should strive for ........
   - Do I dress neatly ............................................
   - Do I keep myself well-groomed .........................
   - Am I reliable in my work .................................
   - Do I show enthusiasm for my work ..................
   - Am I capable of taking a joke ......................
   - Do I talk on the level of the students ...........
   - Is my voice clear ...........................................
   - Is my diction good .........................................

2. PROFESSIONAL ATTITUDE:
   - Am I really interested in my work .....................
   - Can I take criticism and profit by it ..............
   - Am I punctual .................................................
   - Am I fitted best for the teaching profession ......
   - Do I read any professional magazines ..............
   - Do I attend professional meetings and lectures ....
   - Do I cooperate well with fellow-students ..........
   - Do I cooperate with faculty, students, and parents ..

3. SCHOLARSHIP:
   - Have I a good scholastic background for my work ..... 
   - Do I know the rules of all sports activities ........
   - Can I distinguish individual differences ............
   - Am I a good judge of objectives for activities ....
   - Am I familiar with the objectives of phy ed ........
   - Do I teach so as to achieve those objectives ..... 
   - Do I keep up to date on current events ............
   - Do I keep up with modern trends in the field ....

4. CLASSROOM MANAGEMENT:
   - Can I solve problems promptly and effectively ......
   - Do I use available materials ............................
   - Do I begin class on time ..................................
   - Are materials to be used ready when needed ......
   - Do I organise the class in the most efficient manner
   - Am I conscious of light, temperature & ventilation.
Am I conscious of health and sanitary measures ....
Am I acquainted with all equipment used ............
Do I see that equipment and areas are used properly.
Am I aware of proper disciplinary measures .........
Does each pupil take part in some activity during
the class period ........................................
Do I direct "horse-play" to a good end ..............

5. LEADERSHIP ABILITY:
Am I able to arouse the interest of the pupils .....  
Am I able to stimulate initiative in pupils ........
Do I make a good example of character .............
Am I a good moral example ............................
Am I a good influence on the pupils ................
Do I accept responsibility willingly ...............  
Am I able to create learning situations ............
Am I loyal to my superiors ............................
Do I have faith in them ....................................

6. TEACHING TECHNIQUE:
Do I know the subject matter ........................
Do I select subject matter in the light of definite
objectives .................................................
Do I know how to formulate definite teaching units ...
Are my lesson plans directed toward the objectives ...
Am I thoroughly familiar with the lesson plan .......
Are my questions and explanations understood by all.
Am I acquainted with the procedures of testing .....  
Do my tests measure what they are supposed to
measure ......................................................
Are my demonstrations clearly done .................
Do my demonstrations and explanations bring proper
control .........................................................
Do I have the attention and control of the pupils ...
Must I rely on disciplinary measures to hold control
Do I check attendance promptly every day ............
Do I keep my records accurately and up-to-date .....  

NOTE: This is by no means a complete list; each individual
can undoubtedly add many more items that will apply
to his individual case.
Check-list for Student-teacher Evaluation

1. Personal Equipment:
   Personal appearance..............................
   Reliability...........................................
   Enthusiasm..........................................
   Industry and Initiative..........................
   Sense of humor......................................
   Command of English...............................'
   Proper uniform....................................
   Tact...................................................
   Posture and poise.................................
   Voice.................................................

AVERAGE..............................................

2. Professional Attitude:
   Interest in work.................................
   Interest in pupils...............................
   Attitude toward criticism.....................
   Punctuality........................................
   Professional growth............................
   Cooperation with faculty and pupils.........
   Interest in school and community...........

AVERAGE..............................................

3. Scholarship:
   Knowledge of subject matter..................
   Attention to individual differences.........
   Use of fundamental objectives................
   Interest in current events....................
   Knowledge of developments in the field.....

AVERAGE..............................................

4. Classroom Management:
   Methods of class organization................
   Ability to meet emergencies...................
   Availability of equipment & materials........
   Attention to light, heat, and ventilation...
   Care of equipment and areas..................
   Discipline.........................................
   Economy of time and effort....................
   Health and safety measures....................
   Handling crowded situations..................

AVERAGE..............................................

5. Leadership:
   Ability to arouse pupil interest and initiative..
   Contributions to social growth of pupils....
   Willingness to assume responsibilities......
   Ability to create learning situations.......
   General culture and refinement..............
   Loyalty to superiors............................
   Wholesome social outlook.....................

AVERAGE..............................................
6. Teaching Technique:
   Care in selection of subject matter..............................
   Skill in preparation................................................
   Personal skill in activities........................................
   Questioning and testing............................................
   Skill in explaining and demonstrating...........................
   Ability to get results................................................
   Recognition of individual differences...........................
   Control over students..............................................
   Attention to records and clerical details.......................  AVERAGE........

NOTE: This is not to be considered a complete list; there may be many other factors to consider in evaluating any certain individual.
CHAPTER VI
THE SPORTS PROGRAM

Section I. Intramural Sports

Intramural sports are those sports activities carried on within the school itself. They are extra-curricular activities in the sense that they are carried on voluntarily outside of regular school hours, and do not carry credit toward graduation. Their purpose is to supplement the curricular activities of physical education in order that the objectives of physical education may be more fully realized.\(^1\) They bear the same relation to the required physical education program that the school paper bears to journalism. Where stress in the required program is placed on fundamental skills, techniques, and knowledge in a wide variety of sports, intramural sports offer the student an opportunity to specialize in his favorite sport and play it simply for the pleasure of playing.

In order to get the most out of an intramural program it should be headed by someone other than a coach of major interscholastic sports. He should be in full charge of the intramural program and allowance should be made in his teaching assignments so that he will have ample time to plan and prepare a good program. One of the chief drawbacks in most intramural programs has been that they were organized as an after-thought and assigned as an additional burden to someone who already had a full load. Such practice insures the failure of the program. The director of physical education is a logical man to direct the intramural program because he must

plan the over-all program for physical education, and because of the close relation between the required activities and the intramural program. Much of the detail work in running the intramural program can be handled by efficient student managers.

Some of the main considerations in organizing and maintaining a good intramural program may be outlined as follows:

1. Health examinations as proposed for the regular physical education program.
2. Encourage students to take out insurance provided by the North Dakota High School League.
3. Varsity athletes should be denied participation in the same intramural sport.
4. An adequate training period should be provided before actual game competition is permitted.
5. Balance the teams as nearly as possible in skill and size.
6. Intramural sports need not all be competitive. Hiking, skating, swimming, etc., are examples of non-competitive sports suitable for the program.
7. Activities should fit the age and grade of the pupils; for example, football should be limited to senior high grades.
8. The program must have a variety of activities in order to attract a maximum number of students.
9. Development of varsity material is a secondary consideration; primary aim is to furnish every student a chance to participate.
10. Use only competent officials for games; train student officials, and use them for lower grades.
11. Round-robin tournaments are better than elimination tournaments.
12. Make maximum use of student managers; let them earn points toward a letter by their work.
Competitive teams or groups may be organized on the basis of classes (Fresh, Soph., etc.), home rooms, clubs, physical education classes, or residential sections. Any number of teams of comparable skill may be organized and admitted from of the above organizations or groups.

A system of awards should be worked out so that winners and runner-ups may be appropriately recognized. Results of events should be posted on the bulletin boards together with rosters of squads. Stress ethics and good sportsmanship. This is an excellent opportunity to emphasize the social and democratic aspects of physical education.

**TABLE IV**

**JUNIOR HIGH INTRAMURAL PROGRAM**

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<thead>
<tr>
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<td>Volleyball</td>
<td>Track and field</td>
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<td>Boxing</td>
<td>Tennis</td>
</tr>
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<td>Basketball</td>
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</tr>
<tr>
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<td>Archery</td>
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</table>

**SENIOR HIGH SCHOOL**

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</thead>
<tbody>
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<td>Basketball</td>
<td>Track and field</td>
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<tr>
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<td>Speedball</td>
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<td>Winter sports</td>
<td>Baseball</td>
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Note: Not all of the above activities would be included in the program at the same time. Activities should be selected on the basis of student interests, and limited to those that can be properly supervised. It will be noted that the above list of activities provides for the restricted group as well as the normal group of students.
Due to limitations of indoor space and the fact that outdoor play areas are so far from the school building the intramural program at Central has been very limited. There has also been a shortage of instructors to carry on the work. However, with the addition of another instructor it is believed that a suitable program can be established. It is the belief of the writer that a good program of fall and spring intramurals can be arranged rather easily; the winter program offers more problems because of lack of space. The program at both high schools suffers the same handicap in winter, although the outdoor playground at South Junior high school might be utilized to some extent for skating and hockey. A program that might be adapted to the use of both schools is offered in Table IV.

During the past winter the writer experimented with a plan to get as many boys participating in sports as possible. Basketball squads were organized in the freshman and sophomore classes, and a junior varsity squad was formed from upper classmen. All of these squads in addition to the varsity squad played a full interscholastic schedule. The plan worked very well. No players were cut from the squads, and more than 70 boys played and practiced regularly throughout the season. Approximately 60 games were played by the four squads. It is not believed that such a program should be substituted for an intramural program, but it did attract and hold more boys than any winter program previously attempted. It is felt that this program does take care of the basketball group, but that winter sports, including hockey, may well be added to the program. Boxing is another possibility.
Section II. Interscholastic Sports

It is the sincere belief of the writer that interscholastic athletics should be an integral part of the physical education program. They can be justified only if they contribute to the objectives of the over-all educational curriculum. Whether or not they do this depends in large measure on the quality of leadership in the school administration and coaching staff. Most of the evils of interscholastic athletics stem from the fact that they have, for the most part, been kept separate from the regular physical education program. Too much emphasis has been placed on winning games, on finance, and on leagues, conferences and tournaments. The pressure to win has caused many coaches to play boys who were in no condition to play. Many grown men today are walking on "bad" knees, have "murmuring" hearts, and other physical handicaps that could have been avoided but for poor judgment and selfishness on the part of the coach. On the other hand, when coaches stress fine ideals of cooperativeness, helpfulness, self-sacrifice, friendly cordial spirit, excellent physical condition, clean living, playing for fun, and playing according to the spirit of the rules rather than using sharp tactics barely within the letter of the rules, the results are bound to be good.

The North Dakota High School League is the legislative body governing interscholastic athletics in this state, and furnishes a complete set of rules which member schools must obey. It also offers insurance against various types of accidents and injuries common to athletics. All players should be urged to carry this protection. It may be taken for just one sport for the year or for all sports and physical education, or any combination. The cost is nominal.
Although the League does not require physical examinations for athletes, it is strongly recommended that all boys be required to take a thorough physical examination and obtain the written consent of their parents or guardian before being allowed to participate in athletics. This is merely good sense. It will have the effect of discovering any defects that might be aggravated by participation, and will protect the coach and school to a great extent from possible legal action. It is also good policy to have a physician present at all games. There are many times when a boy is injured that the degree of injury cannot be clearly determined by the coach or trainer, and when attempted treatment or diagnosis by any other than a licensed physician is extremely unwise and dangerous. Athletics should always be conducted with the physical health and welfare of the player in mind.

Good equipment is another vital consideration in the welfare of players. It is poor economy to buy cheap equipment. Good equipment lasts longer and is an added safety measure. It should always be kept clean and in excellent repair. In addition to the safety and lasting qualities of good equipment there is the additional factor of box office attraction. A poorly dressed or equipped team has little box appeal. A well-equipped and snappily dressed team will actually play better than the same team poorly dressed; it is a psychological factor well worth considering.

High school conferences have done much in eliminating many of the old evils of athletics, and in winning the cooperation of educators in admitting the interscholastic program to its rightful place in the curriculum.²

However it is necessary to guard against over-organization. Belonging to too many conferences, or allowing the conference to become too large forces teams to play too many games in a season. Some state athletic organizations have gone so far as to limit the number of games a school may play in any one sport. Others make strong recommendations as to such limits. There is little doubt that Central High School, due to conference obligations, is being forced to play too many games in basketball. The Minnesota Athletic Board of Control recommends a maximum of sixteen basketball games in one season exclusive of tournaments. That seems a reasonable suggestion. The number of football games is limited by the climate in this area to a number which should not be considered excessive. Weather also controls the number of track meets to a point where there is little danger of excess.

Athletic conferences naturally lend themselves to championships, as does the organization of the State High School League. The main difference is the manner of determining championships. There are many objections to the tournament system of determining championships. Some of the major objections might be listed as

1. Public pressure makes championships rather than the game itself the object of play.
2. The participating schools become disrupted with the excitement and abnormal absences.
3. Coaches, administrators, news agencies and the general public over-emphasize the importance of winning.
4. It places too much pressure on the coach and players; many coaches have lost their jobs because they didn't win the championship when they were "supposed to."
5. There is greater attention devoted to the lads who need it least.
6. Tournaments are harmful physically and emotionally to the participants.

---

League or conference championships awarded on the basis of percentage in season play are much less objectionable. All the player benefits attributed to tournament play, such as travel, school spirit, community pride, and all others, can be developed to the same extent through the percentage system of determining championships. It is not only the players that suffer from the highly commercialized tournament play we have in North Dakota; spectators, both students and townspeople, are effected adversely through the hysteria prevailing at some of our tournaments. It is the responsibility of the school administration and the coaching staff to guard against such ill effects by conducting the interscholastic athletic program on a sane educational basis. This program should be only another approach to the aims set forth in Chapter 3 of this thesis.

Trends in Interscholastic Athletics. The results of a nation-wide survey conducted in 1938 by the Committee on Interscholastic Athletic Standards for Boys, a committee of the American Association for Health, Physical Education, and Recreation, indicate the following trends in interscholastic athletics:

1. A growing belief and practice in including interscholastic athletics in the physical education program.

2. The elimination of formal scholastic requirements for participation.

3. The elimination of over-night trips.

4. The elimination of post-season games and tournaments.

5. The elimination of state tournaments.
6. Limiting the number of games played during the season (Football 7, basketball 18, track 7, baseball 16, golf 16, ice hockey 14).

7. Limiting the length of sport seasons.

8. Prohibiting spring football practice, and also practice before the actual opening of school in the fall.

9. All coaching should be by regular members of the faculty, and preferably by trained instructors in physical education.

10. When physical education teachers coach sports, the coaching is considered part of their regular teaching load (the equivalent of two class periods), and their class periods are adjusted accordingly. When academic teachers coach sports their class work is reduced at least two periods per day or they are paid up to $500 extra.

11. Requiring medical examinations of all athletes at the beginning of each season.

12. Requiring written consent of parents before participation.

13. Financing the complete athletic program by the Board of Education, using tax monies.

14. Lowering ticket prices so everybody can afford to attend games; admitting all students free.

15. Not allowing interschool competition below the tenth grade.

16. Elimination of term "minor sport"; all sports are considered on the same basis and the same type of award given for all.

In the light of the trends listed above it would appear that the athletic program in the Grand Forks Public Schools follows quite closely the national trends. There are some differences due to geography and climate, such as the trend in regard to over night trips. The writer can see no serious objection to such trips. In fact, there are many advantages. It has been the experience of the writer to have boys on his squad who had never slept in a hotel, eaten in a Pullman diner, ridden on a train, ordered
a meal in a good restaurant, slept in a Pullman, or ridden in a plane. Athletic trips furnished the first such experiences for them. Certainly such experiences add greatly to their social development, and general knowledge. Another consideration in regard to over night trips in North Dakota is the safety factor in traveling in winter.

In general it is the belief of the writer that the interscholastic program in the Grand Forks public high schools is organized on a sound basis, that there is no undue emphasis either from the financial or winning angles, and that the program as a whole is being conducted as an intelligent educational venture rather than a Roman Holiday.

It is recommended that in keeping with the above trends, spring football be eliminated, the number of basketball games during the season be reduced, support toward the elimination of tournaments be continued, and that medical examinations and parents consent be required of all boys participating in the athletic program.
BIBLIOGRAPHY

Books


Periodicals and Bulletins


Administrative Manual for North Dakota High Schools, Bismarck: Department of Public Instruction, 1944.

State Courses of Study

Minnesota  Iowa  Ohio
Indiana  Oregon  Connecticut
Illinois  Wisconsin

City Courses of Study

Long Beach, Cal.  Detroit, Mich.
Los Angeles, Cal.  Fort Worth, Texas
Springfield, Mass.  Great Falls, Mont.
Bismarck, N. D.  Fargo, N. D.
Unpublished Materials


<table>
<thead>
<tr>
<th>Age Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-School 3-7</strong></td>
</tr>
<tr>
<td>Activity hunger</td>
</tr>
<tr>
<td>Lack of physical power</td>
</tr>
<tr>
<td>Poor body control</td>
</tr>
<tr>
<td>Likes chase and climbing</td>
</tr>
<tr>
<td>Activity curiosity &amp; vivid imagination</td>
</tr>
<tr>
<td>Desire to imitate</td>
</tr>
<tr>
<td>Story interest</td>
</tr>
<tr>
<td>Love of rhythm and singing</td>
</tr>
<tr>
<td>Poor powers of attention</td>
</tr>
<tr>
<td>Highly individualistic and no cooperation</td>
</tr>
<tr>
<td>Moral side lacking</td>
</tr>
<tr>
<td>Manipulative &amp; constr. tendency</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Susceptibility to fatigue</td>
</tr>
<tr>
<td>Fighting tendency</td>
</tr>
<tr>
<td>Slow phy. develop.</td>
</tr>
<tr>
<td>Desire for adventure</td>
</tr>
<tr>
<td>Lack of perseverance</td>
</tr>
<tr>
<td>Rivalry and gregariousness</td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>Desire of B &amp; G. to separate</td>
</tr>
<tr>
<td>Power of abstract reasoning begin.</td>
</tr>
<tr>
<td>Strong emotions</td>
</tr>
<tr>
<td>Moody and daydreaming</td>
</tr>
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</table>
### Age Characterizations

<table>
<thead>
<tr>
<th>Age</th>
<th>Pre-School 3-5</th>
<th>Elementary 6-8</th>
<th>Intermediate 9-11</th>
<th>Jr. High School 12-15</th>
<th>Sr. High School 16-18</th>
<th>College 19-22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>developing sense of honor</td>
<td>continuing</td>
<td>continuing</td>
<td>Hero worship and susceptible to adult leadership</td>
<td>strong but evaluative values more</td>
<td>exists but more critical</td>
</tr>
<tr>
<td></td>
<td>lack of understanding adult views</td>
<td>begin thinking of life</td>
<td>adult interests and responsibilities</td>
<td>development of self control</td>
<td>high self control</td>
<td>highly intelligent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>strong interest in sports and athletics</td>
</tr>
</tbody>
</table>

### General Types of Activity by Age Groups
- 6-11 = General wide variety
- 10-12 = Beginning technique
- 12-15 = Team play
- 16 on = Speed and skill: emphasis the individual
<table>
<thead>
<tr>
<th>Code</th>
<th>Heart</th>
<th>Date</th>
<th>Defects Found</th>
<th>Immediate Action Important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Do you consider him fit for participating in a strenuous five day a week physical education program? Yes____ No____**

If he is not fit what specific corrective work is necessary to make him fit? ________________________________

**Other recommendations or comments: ________________________________**

Signed_________________________ Physician_________________________

(This card may be used for three examinations)
## HEALTH HISTORY (To be completed in school)

**Date**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Other</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you been gaining or losing weight?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is your appetite good?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you eat regularly?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have regular bowel movements?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you sleep well?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you become nauseated or vomit?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have burning when urinating?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have frequent colds and sore throats?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have coughing of over three weeks duration?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you ever spit blood?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you ever have chest pains?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you get short of breath easily?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have frequent headaches?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have dizzy spells?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you think you are in good health?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What major operations have you had?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do any of your relatives have or have they died of tuberculosis, cancer or diabetes? (Underline with red.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>Sex</td>
<td>Address while attending school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-----</td>
<td>--------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Born in</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Township</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State or For. Country</td>
<td>Year</td>
<td>Month</td>
<td>Day</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School pupil is attending</td>
<td>Base of district</td>
<td>No.</td>
<td>(City)</td>
<td>(Village)</td>
</tr>
</tbody>
</table>

Give following after consultation with pupil’s MOM or person who cared for pupil during childhood. Give age at which pupil had any of the following diseases.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Age</th>
<th>Disease</th>
<th>Age</th>
<th>Disease</th>
<th>Age</th>
<th>Disease</th>
<th>Age</th>
<th>Disease</th>
<th>Age</th>
<th>Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scarlet Fever</td>
<td></td>
<td>Smallpox</td>
<td></td>
<td>Diphtheria</td>
<td></td>
<td>Poliomyelitis</td>
<td></td>
<td>Longanitis</td>
<td></td>
<td>Common Colds</td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td>Whooping Cough</td>
<td></td>
<td>Tuberculosis</td>
<td></td>
<td>Poliomyelitis</td>
<td></td>
<td>Tuberculosis</td>
<td></td>
<td>Paralysis</td>
</tr>
<tr>
<td>Chickenpox</td>
<td></td>
<td>Rubella</td>
<td></td>
<td>Mumps</td>
<td></td>
<td>Measles</td>
<td></td>
<td>Diphtheria</td>
<td></td>
<td>Tetanus</td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td>Mumps</td>
<td></td>
<td>Rubella</td>
<td></td>
<td>Measles</td>
<td></td>
<td>Diphtheria</td>
<td></td>
<td>Tetanus</td>
</tr>
</tbody>
</table>

This pupil had—

- A successful vaccination against smallpox when ___ years old. Was vaccinated when ___ years old.
- One, two, three, four, injections against diphtheria when ___ years old. Schick test given ___ months after injection. Results: Positive; Negative.
- One, two, three, injections against typhoid fever when ___ years old.
- Tuberculin test when ___ years old. Type: Van Pierquet; Mantoux; Result.

Operations: Kind: __________ Result: __________ when ___ years old.

Notes on Communicable Diseases:

- Check correct blank space, thus: ✓
- Use pencil

Note: If the child has had one or more of the diseases listed above, this may have a bearing on the origin of actual or potential organic defects as listed on bottom form hereon. For instance, eye trouble after measles, paralysis after poliomyelitis, heart or kidney trouble after scarlet fever. If he has had certain diseases, he is generally immune for life to a second attack, but may become a "carrier" of diseases such as diphtheria or scarlet fever. These facts are vital in the control of such diseases to exclusion from school.
Date of Examination  

<table>
<thead>
<tr>
<th>Age in Years and Months</th>
<th>Structural</th>
<th>Organic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height in Inches</td>
<td>Deformities</td>
<td>Heart</td>
</tr>
<tr>
<td>Weight: Actual in lbs.</td>
<td>Eyes: R-Right L-Left</td>
<td>Lungs</td>
</tr>
<tr>
<td>Enter N-Norm. or % &amp; or %</td>
<td>Ears: R-Right L-Left</td>
<td>Lymph Nodes</td>
</tr>
<tr>
<td>Growths: Normal R-Retarded</td>
<td>Teeth: T-Temporary T-Permanent</td>
<td>Endocrine</td>
</tr>
<tr>
<td>Posture</td>
<td></td>
<td>Digestive Organs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kidneys</td>
</tr>
</tbody>
</table>

Examined by: [Signature]  
Inspected by: [Signature]  

**DATE**  

**RECORD OF DOCTOR'S DIAGNOSES AND FOLLOW-UP WORK**  

**DIRECTIONS**  
An entry based on the code below should be made after each item to indicate findings. Where no entry is made after item, the interpretation will be: Not examined or inspected.  

*Code:*  
- (1930)  
- (20-25)  
- O No defects found.  
- X Defects noted.  
- I Immediate action important.  
- P Parent notified.  
- G Correction made (with date).  
- V Visited doctor or dentist (with date).  

*Note:* All code markings should be entered accurately and legibly.
Appendix II

SUGGESTED FORM  
(State of Minnesota)

PHYSICAL EXAMINATION FOR LIMITED PHYSICAL EDUCATION PARTICIPATION

I have examined ___________________________ and report the

Name of Pupil

Nose_____________________________  Nervous System_____________________________

Throat_____________________________  Glands (specify)_____________________________

Lungs_____________________________  Digestive organs_____________________________

Heart_____________________________  Kidneys_____________________________

Additional comments: ...............................................................

I recommend that ___________________________ take part in the following
types of activities in the school physical education program. (check those
columns which represent the type of activity in which the pupil may safely
participate.) The law provides that suitable modified courses (work) shall
be provided for pupils physically or mentally unfit or unable to take the
courses provided for normal pupils. Consequently, each pupil must take some
type of work, regardless of how limited it may be. No pupil can be excused
completely.

Explanation: Below are listed types of activities in columns according to
degree of strenuousness as conducted in our physical education program.
Check only those columns which contain activities suitable for participation
by the pupil in question. It may be that some activities in a column are
suitable and others are not. If this is the case, check the column and cross
out the activities which are not suitable. Your recommendation will be care­
fully followed. If this is a temporary situation, please indicate for what
duration of time. Your activity recommendations shall be followed. The
Physical Education Department wishes to cooperate with you and is anxious to
follow your activity recommendations. In case you wish a conference with
the instructor, please indicate.

Very Strenuous (____)  Strenuous (____)  Mild (____)  Very Mild (____)

Basketball  Apparatus  Aerial Darts  Croquet
Boxing  Badminton  Archery  Darts
Cross Country  Baseball or  Bowling  Fly or bait casting
Field Ball  Softball  Box Hockey  Horseshoe
Long Distance Hiking  Calisthenics  Deck Tennis  Marching
Speedball  Relays (Gym.)  Golf  Quoits
Soccer  Rhythms  Paddle Tennis  Ring Toss
Tennis  Swimming  Table Tennis  Short Hikes
Touch Football  Tumbling  Track and Field  Shuffleboard
Wrestling  Volleyball  Tetherball

Date ________________________  Signed ________________________  M.D.

September, 1943
Appendix II (cont'd)

SUGGESTED FORM

Modified Activities for the Handicapped

PRINCIPAL

Dear Sir:

We are attempting to carry out a Health, Physical Education and Recreational Program in our school and as such are very much interested in the physical condition and social development of each child. We are anxious that each develop normally.

We are sympathetic with the condition of ____________________________ and wish to help her any way we can. Our program is so arranged and conducted that we feel she can accomplish something in our classes and thus not isolate from the group as a "special" or "disabled" case. We expect her to report to the Physical Education classes if she is able to attend school.

The activities which we offer our students are listed below. Will you please check those activities which she may participate in while under your care.

<table>
<thead>
<tr>
<th>Very Vigorous</th>
<th>Vigorous</th>
<th>Mild</th>
<th>Very Mild</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball</td>
<td>Soccer</td>
<td>Volley Ball</td>
<td>Table Tennis</td>
</tr>
<tr>
<td>Speedball</td>
<td>Softball</td>
<td>Badminton</td>
<td>Sliding</td>
</tr>
<tr>
<td>Touchball</td>
<td>Track and field</td>
<td>Deck Tennis</td>
<td>Skiing</td>
</tr>
<tr>
<td></td>
<td>Calisthenics</td>
<td>Marching</td>
<td>Hiking</td>
</tr>
<tr>
<td></td>
<td>Tumbling</td>
<td>Social Dancing</td>
<td>Shuffleboard</td>
</tr>
<tr>
<td></td>
<td>Relays</td>
<td>Folk Dancing</td>
<td>Darts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tap Dancing</td>
<td>Social Games</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group Games</td>
<td>Showers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stunts</td>
<td>Bicycling</td>
</tr>
</tbody>
</table>

Confined to cot for rest during class period.

How long should she be confined to these activities before she can go on full schedule of work.

We thank you for your cooperation.

Yours truly,

Girls' Physical and Health Instructor

Will you include the reason for the excuse. (Please be specific) ____________________

__________________________________________

SIGNED

DOCTOR
Each Class Period is to begin with an 8 Minute (Minimum) Calisthenic Drill

<table>
<thead>
<tr>
<th>No. of Weeks</th>
<th>7th Grade</th>
<th>8th Grade</th>
<th>9th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CLASS ORGANIZATION, TESTING, CLASSIFICATION, MINNESOTA PHYSICAL EFFICIENCY TEST, ORGANIZATION OF SQUADS, ETC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>SOCCER (Elementary)</td>
<td>TOUCH FOOTBALL (Elementary)</td>
<td>SPEEDBALL (Elementary)</td>
</tr>
<tr>
<td>3</td>
<td>BASKETBALL</td>
<td>BASKETBALL</td>
<td>BASKETBALL</td>
</tr>
<tr>
<td>4</td>
<td>STUNTS and TUMBLING</td>
<td>STUNTS and TUMBLING</td>
<td>STUNTS and TUMBLING</td>
</tr>
<tr>
<td>2</td>
<td>APPARATUS</td>
<td>APPARATUS</td>
<td>APPARATUS</td>
</tr>
<tr>
<td>6</td>
<td>MASS ACTIVITIES</td>
<td>VOLLEY BALL (Elementary)</td>
<td>VOLLEY BALL (Elementary)</td>
</tr>
<tr>
<td>3</td>
<td>COMBATIVE STUNTS</td>
<td>WRESTLING</td>
<td>BOXING</td>
</tr>
<tr>
<td>3</td>
<td>TRICK and FIELD</td>
<td>TRACK and FIELD</td>
<td>TRACK and FIELD</td>
</tr>
<tr>
<td>1</td>
<td>TESTS</td>
<td>TESTS</td>
<td>TESTS</td>
</tr>
</tbody>
</table>

**APPENDIX XII**

- **CLASS ORGANIZATION, TESTING, CLASSIFICATION, MINNESOTA PHYSICAL EFFICIENCY TEST, ORGANIZATION OF SQUADS, ETC.**
- **MASS ACTIVITIES**
- **APPARATUS**
- **COMBATIVE STUNTS**
- **TRICK and FIELD**
- **TESTS**
- **SOFTBALL (Elementary)**
- **RECREATIONAL SPORTS**
- **(CONDITIONING DRILLS)**

**NOTES**

- Each Class Period is to begin with an 8 Minute (Minimum) Calisthenic Drill.
### Appendix III (cont’d)

#### MINNESOTA STATE PHYSICAL EDUCATION OUTLINE FOR BOYS

<table>
<thead>
<tr>
<th>No. of Weeks</th>
<th>7th Grade</th>
<th>8th Grade</th>
<th>9th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CLASS ORGANIZATION, TESTING, CLASSIFICATION, MINNESOTA PHYSICAL EFFICIENCY TEST, ORGANIZATION OF SQUADS, ETC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOUCH FOOTBALL (Advanced)</td>
<td>ADVANCED SOCCER or ADVANCED SPEDBALL or FIELD HOCKEY (choose one)</td>
<td>6-MAN TOUCH FOOTBALL (Advanced)</td>
</tr>
<tr>
<td></td>
<td>MASS ACTIVITIES</td>
<td>MASS ACTIVITIES</td>
<td>MASS ACTIVITIES</td>
</tr>
<tr>
<td></td>
<td>Calisthenics</td>
<td>Calisthenics</td>
<td>Calisthenics</td>
</tr>
<tr>
<td></td>
<td>Marching</td>
<td>Marching</td>
<td>Marching</td>
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<tr>
<td></td>
<td>Relays</td>
<td>Relays</td>
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<tr>
<td></td>
<td>Posture</td>
<td>Posture</td>
<td>Posture</td>
</tr>
<tr>
<td></td>
<td>Class Alignment</td>
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<td>Class Alignment</td>
</tr>
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## Appendix IV

### A SIX YEAR CURRICULUM FOR BOYS (Ohio)

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Appendix V

THE MINNESOTA PHYSICAL EFFICIENCY TEST

Introduction

Experience has indicated that the use of a set of standards measuring physical achievement is a desirable procedure in physical education. A test to provide the means whereby it is possible to measure improvement in certain selected items has been designed for pupils in the upper elementary grades and the secondary schools of Minnesota. The test is known as the Minnesota Physical Efficiency Test. It is to be considered as measuring to a considerable degree physical fitness or physical efficiency. Properly used the test should serve as a motivating device. Pupils should be encouraged to improve their scores or grades. A record of pupil achievement should be kept for each separate test item from year to year. In general the standards increase for each age and it is thus necessary to obtain a better record from year to year. Consequently, a pupil obtaining a "C" grade during any current year should be encouraged to develop his ability so that he may be able to receive a "B" or an "A" grade the following year.

The Test

The Minnesota Physical Efficiency Test is composed of six selected items which are as follows: board jump, pull-ups, push-ups, sit-ups, vertical jump, and the Burpee test.

Directions for the Individual Tests

1. Board Jump. Measure the jump from the take-off mark to the mark made by the heels nearest to the take-off line. The take-off mark must be placed so that the person being tested jumps from a gymnastic mat. A line should be drawn on the mat at the take-off mark. The various required distances for successful completion of the test may be painted or marked with chalk on the mat and thus facilitate the measurement of jumps. Precautions should be taken to prevent injuries from landing on a hard surface or from falling back on the floor. At all times the jump must be made from a mat and the landing be made on a mat. When jumping, the pupil stands with toes even with the edge of the take-off mark and then jumps forward (use a two-foot take-off) as far as possible. The pupil should swing arms and hands to help in jumping. The better of two jumps is recorded.

2. Pull-Ups. (Boys) Hang on a horizontal bar, arms and legs fully extended. Be sure that the beginning of the pull-up or chin-up that the arms are straight. This is the starting position. Pull the body up so that the chin is above the bar. No swinging or kicking in order to help lift the body is permissible. This counts as one pull-up. Then lower the body to the starting position. Hands should be placed
so that knuckles are over the bar, thumbs under the bar, and the palms
of the hands facing away from the body. This is known as the over-hand
grasp. Repeat the exercise as many times as the pupil can pull up so
that the chin is over the bar. Knees must be kept straight during the
exercise. In counting the pull-ups, the tester may indicate successful
completion of the pull-up when the pupil lowers the body to the starting
position and arms become straight. Thus, there is no question about
starting from the correct position for the next pull-up.

3. Push-ups. Push-ups are to be done on the floor. They are completed from
a front leaning rest position in which the body is supported on the
hands and feet with the arms and body straight. From a squat position,
place hands on floor and extend legs backwards so that feet are close to-
gether, the back straight, legs straight, and arms straight with weight
on hands and toes only. This position is the starting position. The
first part of the exercise calls for a bending (flexing) of the arms,
allowing the body to come down so that the chest barely touches the
floor. The second phase of the exercise calls for the arms to be extended
so that the body may be brought to the starting position. This complete
procedure counts as one push-up. The body cannot rest on floor and the
body then pushed back away from the floor at once. The head, trunk, and
legs are to remain in a straight line. The push-ups (dips) are to be
done without rest between parts of the exercise or the complete exercise.
If any part of the body, except hands, toes, or chest touch the floor,
the trial is not counted. The number of successful completions of the
complete exercise indicates the number of push-ups. (Emphasize form.)
Do not count a push-up as complete until the arms are fully extended.
Also require that body be lowered to floor and back kept straight through-
out the test. (See comments concerning pull-ups for boys.) To improve
skill, have pupils practice push-up from prone position, merely extend-
ing arms, then proceed to practice from position of knees on floor
rather than toes. Finally, practice regular push-up form.

4. Sit-Ups. Boys (Army Method) The sit-up exercise is done from a lying
position, back on the floor, fingers of both hands interlaced behind
the neck, and feet held together and down by another member of the
class who serves as tester. (Hold ankles with just enough pressure to
keep feet on floor, but allow calf and thigh of leg or knees to raise
slightly if they are inclined to do so.) The first part of the test
calls for the trunk to be raised forward and moved downward, rotating
so that the right elbow touches the left knee. The second part of the
test calls for a return of the body to the starting position. On the
next sit-up the left elbow touches the right knee. Thus, alternate
elbows touch alternate knees each time the trunk is raised. The com-
plete exercise is to touch the right knee with the left elbow or vice
versa. Each time the pupil sits up and touches a knee, it counts as
one sit-up. The tester who holds the pupil's feet counts aloud as the
exercise progresses. No rest period is allowed between parts of the
exercise or between two complete exercises. (Use same technique for
counting as indicated in pull-ups and push-ups.)

NOTE: A more difficult form may be used by not holding the feet, but
requiring the pupil to keep feet in contact with the floor during
the sit-up.
Appendix V (cont'd)

5. **Vertical Jump.** (Jump and Reach) The pupil takes a position facing the wall, feet together, toes touching the wall, and heels touching the floor. With one hand he reaches as high as possible (stretches) keeping the heels on the floor, hand and forearms against the wall, and makes a mark on the wall or vertical jump board with a short piece of chalk or with his fingers which have been dipped in chalk dust. A blackboard may be used to mark upon by moistening the fingers with water. After marking the wall, the pupil then turns (making a right or half face) so that the arm used to mark the wall is next to the wall. He then swings both arms vigorously and makes a jump vertically into the air, reaching up and touching the wall as high as it is possible for him to touch, and thus makes a mark on the wall with a second mark. The distance between the two marks is the individual's record. Record the distance to the nearest inch. The better of two trials is recorded. No preliminary springs or jumps off the floor are allowed.

6. **Burpee Test.** (30 seconds) The Burpee test consists of four distinct counts. On the first count, the pupil bends to the squatting position placing his hands on the floor, arms between the legs. On the count of two, the pupil extends his legs straight backward, feet together, and assumes the same position as though he were ready to start dipping for the push-up exercise. Feet cannot be extended backward until the position for count one has been definitely taken. (See starting position for push-up.) On the count of three, he resumes the same position as he was in at the count of one and on the count of four, he resumes the starting position, coming to a definite upright position, knees straight. Each position must be taken definitely and deliberately. The test is to determine the number of times a pupil can go through the complete cycle in thirty seconds. Failure to execute any of the positions properly results in loss of count for the complete cycle in which the failure occurred. Count each cycle, completed according to directions, as one successful completion (emphasize form).

**Administration of the Test**

In administering the test, the various test items should be divided into two groups.

**Group I** includes those items which can be tested in mass. They consist of sit-ups, push-ups, and the Burpee test. The most efficient manner of testing is to line the class into two equal lines and assign pupils opposite each other to work as partners. While the pupils of one line are doing the test, the partners in the opposite line are counting and recording results. The procedure is then reversed, and the pupils of the second line take the test. Individual record cards should be supplied pupils so that proper entries may be made upon a suitable card.

**Group II** consists of the broad jump, vertical jump, and the pull-ups. Squads may be used for this testing, having squad leaders test each squad member. The establishment of three to six stations in the gymnasium and the rotation of squads from station to station will accomplish...
a complete testing on these items of a class from 40 to 50 pupils in
20 to 25 minutes. Thus, one or two squads would be working on the broad
jump at the same time, another one or two squads would be working on the
vertical jump, and one or two squads would be working on the pull-ups.
Final records should be placed upon the pupils’ permanent record cards
by the squad leader.

CAUTION: Pupils are not to be allowed to take additional trials in
order to better their record. No trials are to be given to better individu­
al records after the pupils have completed the test until the next
regular testing period (usual interval of one semester). Not more than
two trials for the broad jump and the vertical jump may be given. The
trials are to be given on the same day. The best mark obtained shall
be recorded

The physical efficiency test should be administered during the first week
of school. It is not necessary to use more than one class period for the
administration of these tests. (One-half a class period for two days may
be devoted to the administration of the test rather than a single day if
the teacher desires.) During the last week of the first semester, the
test is to be again administered to each pupil in the class. A third and
final test at the conclusion of the second semester completes the total
testing program. At least three complete tests for each pupil per year
(begiining, middle and close of the school year) are to be required.

Teachers should carefully analyze marks or grades obtained at the time
of the second and third tests. Individual pupil improvement in the various
tests should be evident. Physical education programs should stress body
conditioning to the point where such improvement is possible of achievement.
The physical efficiency test is a test of minimum essentials. Pupils and
teachers should be aware of the nature and value of the test.

Grading

The teacher is given his choice of two types of marking or grading in
the physical efficiency test. The recommended type is to use standards
which have been established for the age of the pupil. The age of the pupil
on the opening day of the current school year shall be taken as the standard
age for that pupil for the entire school year. In case semester promotions
are used, the age of the pupil at the date of the beginning of the semester
shall determine the pupil’s age.

The alternate method of scoring and marking is to assign one age standard
for all pupils in a given grade. Thus, for the seventh grade, the standards
for 12-year olds are required, in the eighth grade standards for 13-year old
pupils are required, and in the ninth grade the standards for 14-year old
pupils are required, etc.

Pupils under ten years of age shall be required to complete the standards
for ten-year old pupils. Pupils over seventeen years of age are required to
complete the standards required of pupils age seventeen. In each grade there
are four levels of achievement—A, B, C and D. Pupils must obtain the record indicated in order to receive the grade which is indicated.

No pupil can be considered as passing in the physical efficiency test unless he has received a grade of at least "D" on all six items of the test. These tests are considered as minimum essentials. To obtain the final grade for the physical efficiency test, all six items should be averaged, bearing in mind that a failure in any one of the six items automatically fails the pupil for the entire six. The mark earned in the physical efficiency test is to be used only in the final grading for each semester or year of work. It is recommended that 50 per cent of the final examination grade at the close of the year or the semester in physical education be assigned to the record in taking the physical efficiency test. Thus, the grade earned by the pupil in these tests is to be considered as a portion of the final grade in physical education.

Motivation

The physical efficiency test scores obtained at the close of the first semester or at the close of the year are the scores which are to be used in grading. The purpose of the test given at the beginning of the school year and of the cumulative records for each pupil are to motivate and encourage pupils to improve their individual achievement. In the same manner, teachers can check up on the effectiveness of their program as far as these items measure physical efficiency. The inclusion of an opportunity to practice the various tests throughout the school year should be incorporated into the daily program. Calisthenics, stunts, apparatus work, track and field activities, all offer unlimited opportunities for practice and motivation. Likewise, teachers should encourage pupils to practice and work at home. However, the teacher should insist that the correct and safe method of practicing the various tests should always be followed by the pupil. By proper use of motivation plus practice, teachers will be able to have pupils achieve the standards established.

Records

A complete record of the Minnesota Physical Efficiency Test for each pupil shall be kept on cumulative record cards which definitely show the progress made throughout each year—grades seven to twelve.
BOYS! PHYSICAL EFFICIENCY TEST STANDARDS (revised)

(Permanent Essentials)

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<td>18&quot;</td>
<td>11</td>
<td>38</td>
<td>55</td>
<td>18</td>
</tr>
<tr>
<td>Age 14</td>
<td>D</td>
<td>5'3&quot;</td>
<td>12&quot;</td>
<td>2</td>
<td>8</td>
<td>30</td>
<td>14</td>
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<tr>
<td></td>
<td>C</td>
<td>6'3&quot;</td>
<td>15&quot;</td>
<td>6</td>
<td>16</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>9th Grade</td>
<td>B</td>
<td>7'1&quot;</td>
<td>17&quot;</td>
<td>9</td>
<td>26</td>
<td>50</td>
<td>18</td>
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<tr>
<td></td>
<td>A</td>
<td>7'6&quot;</td>
<td>19&quot;</td>
<td>12</td>
<td>40</td>
<td>60</td>
<td>19</td>
</tr>
<tr>
<td>Age 15</td>
<td>D</td>
<td>5'6&quot;</td>
<td>14&quot;</td>
<td>2</td>
<td>9</td>
<td>35</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>6'6&quot;</td>
<td>16&quot;</td>
<td>7</td>
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<td>45</td>
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<tr>
<td>10th Grade</td>
<td>B</td>
<td>7'6&quot;</td>
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<td>28</td>
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<td>8'1&quot;</td>
<td>20&quot;</td>
<td>14</td>
<td>43</td>
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<tr>
<td>Age 16</td>
<td>D</td>
<td>5'9&quot;</td>
<td>15&quot;</td>
<td>3</td>
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<tr>
<td></td>
<td>C</td>
<td>7'1&quot;</td>
<td>18&quot;</td>
<td>8</td>
<td>20</td>
<td>50</td>
<td>18</td>
</tr>
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<td>11th Grade</td>
<td>B</td>
<td>7'8&quot;</td>
<td>20&quot;</td>
<td>12</td>
<td>30</td>
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<td>A</td>
<td>8'1&quot;</td>
<td>22&quot;</td>
<td>16</td>
<td>45</td>
<td>70</td>
<td>21</td>
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<tr>
<td>Age 17</td>
<td>D</td>
<td>6'1&quot;</td>
<td>16&quot;</td>
<td>3</td>
<td>10</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>7'3&quot;</td>
<td>20&quot;</td>
<td>9</td>
<td>22</td>
<td>55</td>
<td>19</td>
</tr>
<tr>
<td>12th Grade</td>
<td>B</td>
<td>7'9&quot;</td>
<td>22&quot;</td>
<td>14</td>
<td>32</td>
<td>65</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>8'1&quot;</td>
<td>24&quot;</td>
<td>18</td>
<td>48</td>
<td>75</td>
<td>22</td>
</tr>
</tbody>
</table>

*Squat Thrust*
Introduction: The Minnesota Achievement Tests have been designed to be used as minimum standards of achievement for the various units and grade levels in the physical education program. Each physical education teacher is expected to use the tests listed for the grade and activity at the completion of that specific unit of work. Additional tests may be added, but those listed in this bulletin are to be considered as minimum and shall be given at the appropriate time to each pupil.

Significance of the Tests: The achievement tests provide a progression from grade to grade, following the state outline in physical education. The basic progression of a sound physical education curriculum is incorporated in the achievement test program. Consequently, any teacher by referring to the achievement tests may ascertain the content to be covered at any grade level. Furthermore, the use of achievement tests provides a definite device to measure outcomes and to establish a goal of attainment for pupils. Any sound educational program must provide certain definite measurable devices for recording pupil achievement.

Use of Results: The results of the tests should be used (1) to measure pupil achievement, (2) to measure pupil improvement, (3) as a basis for assigning grades in physical education (see Code XIV-B-77), (4) to motivate pupils, (5) as a diagnostic aid to determine the effectiveness of the instructional program.

Administration of Tests: The tests shall be given during the final class period assigned to the specific unit being tested or in units such as tumbling or rhythm at any appropriate time during the unit (see Code XIV-A-9a and b). Squad leaders should be trained to administer the tests, record results and perform all duties necessary to a testing program. The teacher should not try to give the test or tests personally to each pupil. The teacher may test pupils who need special attention and shall supervise the general testing procedure.

Teachers should motivate pupils and create among them a desire to meet or excel the standard established. Large charts of the standards for each grade level should be posted on the bulletin board. It is further suggested that a copy of the standards for each grade be reproduced and individual copies be given to the pupils as a record of the goal toward which they are to strive. There should be constant emphasis upon achievement and meeting of standards, plus a pride in successful accomplishment in all physical education class work.
**Recording Results:** The results of the tests shall be recorded in the class record book and on the cumulative record card. Each test is a pass or failure test. The pupil either succeeds in attaining the standard prescribed or fails. To obtain an achievement grade for any six weeks' period, consider all achievement tests given and treat each test as a simple problem in an examination.

For example, if 4 tests were given, and the pupils successfully completed the standard for 3 of the 4 tests, the mark earned would be 75 on a scale of 0 - 100, since the pupil successfully met the standard in 3 out of 4 chances.

**General:** The test is composed of 30 specific test items for each grade. In the first column, there are listed the number of the test and the unit in the course of study outline for which the test is prepared. In the second column, the name of the test is given. In the third column, the standard of achievement is stated.

### SEVENTH GRADE BOYS

<table>
<thead>
<tr>
<th>1. Soccer</th>
<th>Dribble</th>
<th>Dribble 75' to post, circle post and return. Time 24 sec. 2 trials allowed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. &quot;</td>
<td>Dist. Kick-off</td>
<td>Kick ball 75' in air. 3 trials allowed.</td>
</tr>
<tr>
<td>3. &quot;</td>
<td>Place kick</td>
<td>Kick goal. 50' dist., 2 out of 3 trials.</td>
</tr>
<tr>
<td>4. Basketball</td>
<td>Pass for Dist.</td>
<td>Pass from 6' diam. circle. 55', use baseball pass. 3 trials allowed.</td>
</tr>
<tr>
<td>5. &quot;</td>
<td>Free Throws</td>
<td>2 goals out of 10 shots from free throw line.</td>
</tr>
<tr>
<td>10. Tumbling</td>
<td>Forward rolls</td>
<td>3 continuous forward rolls in good form.</td>
</tr>
<tr>
<td>11. &quot;</td>
<td>Backward roll</td>
<td>Execute one backward roll in good form. Maintain balance for 5 sec. 3 trials allowed.</td>
</tr>
<tr>
<td>13. &quot;</td>
<td>Shoulder roll</td>
<td>Dive over 3 pupils who are on hands and knees.</td>
</tr>
<tr>
<td>15. &quot;</td>
<td>Hand spring</td>
<td>Climb 15', using hands and feet. 10 sec. 2 trials allowed. (rope)</td>
</tr>
<tr>
<td>16. Apparatus</td>
<td>Rope climb</td>
<td>Walk length of bar in support position. (parallel bars)</td>
</tr>
<tr>
<td>17. &quot;</td>
<td>Hand travel</td>
<td></td>
</tr>
</tbody>
</table>
16. Apparatus
Skin cat

19. "
Hand travel

20. "
Straddle vault

21. "
Knee raising

Seal crawl

23. "
Duck walk

24. "
Rear crab walk

25. "
Carry

26. Track
50 yd. dash

27. "
Discus

28. "
High jump

29. "
Shot

30. "
Broad jump

Thrust legs through arms until back is parallel with bar. Return. 2 trials allowed. (horiz. bar)
Grappling rungs, travel length of ladder. (horiz. ladder)
Vault 3'6" height in correct form.
Ref. VII p. 37.
Hang from top bar, back to bars. Raise knees to chest 6 times. (stall bars)
Crawl 40' in good form.
Walk 75' in good form.
Walk 75' in good form.
Fireman's carry. Boy of equal weight. 40' and return.
9 seconds. 2 trials allowed.
Jr. high school weight. 45', 2 trials allowed.
2'4", 2 trials allowed.
8½ shot, 18½". 2 trials allowed.
Running broad jump. 9'9", 2 trials allowed.

EIGHTH GRADE BOYS

1. Football
Distance Pass
Forward pass from behind restraining line. 60', 2 trials allowed.

2. "
Punt for distance
Punt from behind restraining line. 60', 2 trials allowed.

3. "
Center Pass
Pass 15' spiral to stationary receiver. Belt to shoulder height, 2 out of 3 trials.

Leg lift
Lie on back, hands under buttocks, raise legs vertically, 20 times. 2 trials allowed.

5. "
Chest raise
Lie on stomach, clasp hands behind neck, have partner hold legs, raise chest from floor 20 times. 2 trials allowed.

6. "
Wrestler's bridge
Take wrestler's bridge position. Retain for 15 sec.

7. Basketball
Dribble
Dribble in place. Knee high, 35 times. 15 sec. 2 trials allowed.

8. "
Free throws
3 goals out of 10 shots from free throw line.

9. "
Goal shoot
First shot from foul line, others where ball is retrieved. 4 shots in 25 sec.

10. Stunts
Knee bend
Full knee bend on one leg and return. 2 trials allowed. Ref. III p. 195 (51).

11. "
Cross-leg sit
Cross-leg sit and stand without losing balance. 2 trials allowed.
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>12. Tumbling</td>
<td>Wall stand</td>
<td>Hand stand, feet against wall for 5 sec.</td>
<td></td>
</tr>
<tr>
<td>13. &quot;</td>
<td>Extension roll</td>
<td>Backward extension roll with feet straight over head. Ref. III p. 7 (5).</td>
<td></td>
</tr>
<tr>
<td>15. &quot;</td>
<td>Cart wheel</td>
<td>Start from stand and finish at stand. Ref. III p. 23 (2).</td>
<td></td>
</tr>
<tr>
<td>17. &quot;</td>
<td>Head spring</td>
<td>Head and hand spring over rolled mat. Ref. III p. 27 (3).</td>
<td></td>
</tr>
<tr>
<td>18. Apparatus</td>
<td>Rope climb</td>
<td>Climb 15', using hands and feet. 9 sec. 2 trials allowed.</td>
<td></td>
</tr>
<tr>
<td>19. &quot;</td>
<td>Crotch circle</td>
<td>Bar between legs, feet crossed, hands grasping bar in front of hips. Execute complete circle from top of bar to top of bar. (horiz. bar)</td>
<td></td>
</tr>
<tr>
<td>20. &quot;</td>
<td>Two hand hopping</td>
<td>Spring to cross rest (support) on hands. Hop length of bar on both hands. Ref. VII p. 39 (parallel bars)</td>
<td></td>
</tr>
<tr>
<td>21. &quot;</td>
<td>Hand travel</td>
<td>Travel length of ladder, grasping sides. (horiz. ladder)</td>
<td></td>
</tr>
<tr>
<td>22. &quot;</td>
<td>Squat vault</td>
<td>Vault 3'6&quot; in good form. Ref. VII p. 36. (buck, vaulting box, horse)</td>
<td></td>
</tr>
<tr>
<td>23. &quot;</td>
<td>Leg raising</td>
<td>Hang from top bar, alternate leg raise, knees straight to horizontal. 6 times each leg. (stall bars)</td>
<td></td>
</tr>
<tr>
<td>24. Volleyball</td>
<td>Serve</td>
<td>Underhand serve. Must land in opposite court. 20' from net. 2 out of 3 trials. Volley the ball 10 consecutive times above a 7'6&quot; line drawn on the wall. Start ball with pass against wall. Count every time ball strikes hands. 3 trials allowed.</td>
<td></td>
</tr>
<tr>
<td>25. &quot;</td>
<td>Volley</td>
<td>Underhand serve. Must land in opposite court. 20' from net. 2 out of 3 trials. Volley the ball 10 consecutive times above a 7'6&quot; line drawn on the wall. Start ball with pass against wall. Count every time ball strikes hands. 3 trials allowed.</td>
<td></td>
</tr>
<tr>
<td>26. Track</td>
<td>50 yd. dash</td>
<td>8 seconds. 2 trials allowed.</td>
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</tr>
<tr>
<td>27. &quot;</td>
<td>Discus</td>
<td>Jr. high school weight. 50', 2 trials allowed.</td>
<td></td>
</tr>
<tr>
<td>28. &quot;</td>
<td>High jump</td>
<td>3' 8&quot;, 2 trials allowed.</td>
<td></td>
</tr>
<tr>
<td>29. &quot;</td>
<td>Shot</td>
<td>8# shot. 21'. 2 trials allowed.</td>
<td></td>
</tr>
<tr>
<td>30. &quot;</td>
<td>Broad jump</td>
<td>Running broad jump. 10'9&quot;. 2 trials allowed</td>
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</tbody>
</table>

**NINTH GRADE BOYS**

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Speedball</td>
<td>Drop kick</td>
<td>Over goal posts. 10 yds. 3 trials allowed</td>
<td></td>
</tr>
<tr>
<td>2. &quot;</td>
<td>Lift-up</td>
<td>Ball between feet, jump throwing ball up to hands. 2 trials allowed.</td>
<td></td>
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<tr>
<td>3. &quot;</td>
<td>Distance punt</td>
<td>Punt behind restraining line. 80', 2 trials allowed.</td>
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</tbody>
</table>
| 5. | Mass Act | Chest raise  
5. Mass Act | Chest raise  
|   |   |  Lie on stomach, clasp hands behind neck, have partner hold legs, raise chest from floor 30 times. 2 trials allowed.
|   |   | Piggy-back men carry of boy own wt., 35” and return.
| 6. | " | Carry  
6. " | Carry  
|   |   | Basketball throw for goal. 2 min., 35 goals, Ref. V p. 19 (4)
| 7. | Basketball | Goal shoot  
7. Basketball | Goal shoot  
|   |   | 4 goals out of 10 shots from free throw line.
| 8. | " | Free throws  
8. " | Free throws  
|   |   | Chest pass ball 6' dist. against wall for 20 sec. 20 passes needed to pass.
| 9. | " | Speed pass  
9. " | Speed pass  
|   |   | Jump into air, make full turn right or left. Feet must remain stationary upon landing. Ref. III p. 190 (22)
| 10. | Stunts | Spin the top  
10. Stunts | Spin the top  
|   |   | Fall to front leaning rest keeping body straight.
| 11. | " | Front leaning rest  
11. " | Front leaning rest  
|   |   | Throw up to hand balance with assistance. Ref. III p. 19 (14).
| 12. | Tumbling | Hand balance  
12. Tumbling | Hand balance  
|   |   | Come to head and hand balance, maintain 5 sec. 5 trials allowed. Ref. III p. 12 (3).
| 13. | " | Press up  
13. " | Press up  
|   |   | Shoulder balance on thrower's hands grasping knees, 5 sec. Ref. III p. 86 (7).
| 14. | " | Shoulder balance  
14. " | Shoulder balance  
|   |   | Head spring over rolled mat from run. Ref. III p. 26 (3).
| 15. | " | Head spring  
15. " | Head spring  
|   |   | Dive 7' distance over prone bodies. 2 trials allowed.
| 16. | " | Dive  
16. " | Dive  
|   |   | Hand spring on flat mat in good form. Ref. III p. 27 (3).
| 17. | " | Hand spring  
17. " | Hand spring  
|   |   | 15' using hands and feet. 3 sec. 2 trials allowed. (ropes)
| 18. | Apparatus | Rope climb  
18. Apparatus | Rope climb  
|   |   | Execute flank vault over bar at chest height. (horiz. bar)
| 19. | " | Flank vault  
19. " | Flank vault  
|   |   | Mount to cross riding seat, hands in front of body, swing, execute front dismount over right or left bar. Ref. VII p. 40 (2). (parallel bars)
| 20. | " | Front dismount  
20. " | Front dismount  
|   |   | Travel length of ladder, grasping alternate rungs. (horizontal ladder)
| 21. | " | Hand travel  
21. " | Hand travel  
|   |   | Wolf vault right or left. (Suck, vaulting box, horse) Ref. VII p. 21 (13).
| 22. | " | Wolf vault  
22. " | Wolf vault  
|   |   | Hang from top bar. Raise legs together horizontal to floor. 6 times. (stall bars)
| 23. | " | Leg raising  
23. " | Leg raising  
|   |   | Overhand serve. Must land in opposite court. 30', 2 out of 3 trials.
| 24. | Volleyball | Serve  
24. Volleyball | Serve  
|   |   | Volley the ball 20 consecutive times above 7'6" line drawn on the wall at 5' distance. Start ball with pass against wall. Count every time ball strikes hands. 3 trials allowed.
| 25. | " | Volley  
25. " | Volley  
|   |   |  


26. Track
27. "
28. "
29. "
30. "

<table>
<thead>
<tr>
<th>TENTH GRADE BOYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Football</td>
</tr>
<tr>
<td>2. &quot;</td>
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<tr>
<td>3. &quot;</td>
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<tr>
<td>5. &quot;</td>
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<tr>
<td>6. &quot;</td>
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<tr>
<td>7. &quot;</td>
</tr>
<tr>
<td>9. Basketball</td>
</tr>
<tr>
<td>10. &quot;</td>
</tr>
<tr>
<td>11. &quot;</td>
</tr>
<tr>
<td>12. Stunts</td>
</tr>
<tr>
<td>13. &quot;</td>
</tr>
<tr>
<td>14. Tumbling</td>
</tr>
<tr>
<td>15. &quot;</td>
</tr>
</tbody>
</table>
16. Tumbling  Upstart  Upstart with hands on thighs. 3 trials allowed. Ref. III p. 36 (2).
17. "  Roundoff with backward roll  Execute roundoff, finish with backward roll. 2 trials allowed. Ref. III p. 28 (3).
19. "  Somersault  Forward somersault either with or without rolled mat. 2 trials allowed. Ref. III p. 38 (1).
20. Apparatus  Rope climb  20' using hands and feet. 14.5 sec. (ropes)
22. "  Upper arm stand  Upper arm or shoulder stand for 5 sec. (parallel bars) Ref. IV p. 23 (3).
23. "  Hand travel  Grass rungs, travel length of ladder with one knee raised to chest. (horizontal ladder)
25. "  Leg raise  Hang from top bar. Alternate raising of legs horizontally and raising of knees to chest, 12 times (6 of each). (stall bars)
26. Track  100 yd. dash  13.5 sec. 2 trials allowed.
27. "  440 yd. dash  75 sec. 2 trials allowed.
30. "  Broad Jump  Running broad jump. 13'6", 2 trials allowed.

ELEVENTH GRADE BOYS

1. Soccer  Dribble  Dribble 75' to post, circle post & return. 20 sec. 2 trials allowed.
3. "  Distance punt  Punt from behind restraining line. 110', 2 trials allowed.
5. "  Leg lift-sit-ups  Lie on back, legs straight, raise legs 20 times vertically and then immediately do 20 trunk lifts.
6. "  Carry  Arm carry boy of own weight 100' and return.
7. Basketball  Goal shoot  Basketball throw for goal. 1 min., 14 goals, 2 trials allowed. Ref. I p. 23 (5).
8. "  Free throws  4 goals out of 10 shots from foul line.
9. "  Speed pass  Chest pass ball 6' dist. against wall for 20 sec. 30 passes needed to pass test. 2 trials allowed.
10. Stunts

Knee walk

Knee walk on mat 10'. 2 trials allowed. Ref. III p. 191 (29).

11. "

Jump walk

Hold wand with tips of fingers and jump legs through. 2 trials allowed. Ref. III p. 192 (30).

12. Tumbling

Cart wheel

One hand cart wheel from run. 3 trials allowed. Ref. III p. 24 (5).

13. "

Hand stand push-ups

Execute 2 hand stand push-ups, feet against wall. 2 trials allowed.

14. "

Forearm balance

Forearm balance for 5 sec. 3 trials allowed. Ref. III p. 22 (1).

15. "

Hand balance

Hand balance (still), 3 sec. 3 trials allowed. Ref. III p. 19 (14).

16. "

Dive

Dive for height, 4'. 2 trials allowed.

17. "

Hand spring

3 continuous diving hand springs. 2 trials allowed. Ref. III p. 26 (6).

18. Apparatus

Hoop climb

20' using hands and feet. 15.5 sec. (ropes)

19. "

Knee hang

Knee hang and swing off. (horizontal bar) Ref. IV p. 15 (8)

20. "

Uprise

Uprise at backward swing. (parallel bars) Ref. IV p. 23 (4).

21. "

Hand travel

Grasp rungs, travel length of ladder, knees raised to chest. (horizontal ladder).

22. "

Sheep vault

Execute sheep vault. (Buck, vaulting box, horse)

23. "

Leg raising

Hang from top of bar, raise legs together horizontal to floor. 12 times (stall bars).

24. Volleyball

Serve

Place 6' square in center of court. Serve 30' dist. 3 out of 5 trials.

25. "

Highballs

Toss ball into air. Continue to keep ball in air 25 times. Ball must go at least 3' in air.

26. Track

100 yd. dash

13 sec. 2 trials allowed.

27. "

880 yd. dash

2 min. 50 sec. 2 trials allowed.

28. "

High jump

4'4", 2 trials allowed.

29. "

Shot

12#, 26', 2 trials allowed.

30. "

Broad jump

Running broad jump, 14', 2 trials allowed.

**TWELFTH GRADE BOYS**

1. Football

Distance pass

Forward pass from behind restraining line. 105', 2 trials allowed.

2. "

Dropkick

Dropkick for point. 45', 2 out of 5 trials.

3. "

Center pass

Spiral center pass for distance. 45', 2 trials allowed.


V-sit

V-sit for 60 sec.
<table>
<thead>
<tr>
<th>Exercise</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. &quot; Free throws</td>
<td>5 goals out of 10 shots from free throw line.</td>
</tr>
<tr>
<td>9. &quot; Basketball dribble</td>
<td>65' with four obstacles to weave, dribble around and return. 10.5 sec. 3 trials.</td>
</tr>
<tr>
<td>10. Stunts Jump foot</td>
<td>Clasp toe, jump through with free foot. 2 trials allowed. Ref. III p. 196 (53).</td>
</tr>
<tr>
<td>11. &quot; Head pivot (bridge)</td>
<td>Take wrestler’s bridge position and make full turn on long axis. 2 trials allowed. Ref. III p. 193 (26).</td>
</tr>
<tr>
<td>12. Tumbling Head stand</td>
<td>Head stand with legs straddle position, 5 sec. 2 trials allowed, Ref. III p. 192 (1)</td>
</tr>
<tr>
<td>13. &quot; Dive</td>
<td>Dive 8' distance over prone bodies. 2 trials allowed.</td>
</tr>
<tr>
<td>15. &quot; Upstart</td>
<td>Upstart with hands over shoulders pushing on mats. 3 trials allowed. Ref. III p. 36 (1)</td>
</tr>
<tr>
<td>17. &quot; Squat vault</td>
<td>Front leaning rest, squat vault through. 2 trials allowed. Ref. III p. 27 (1)</td>
</tr>
<tr>
<td>18. Apparatus Rope climb</td>
<td>20' using hands and feet. 12.5 sec. (ropes)</td>
</tr>
<tr>
<td>19. &quot; Upstart</td>
<td>Upstart or kip from swing. (horizontal bar)</td>
</tr>
<tr>
<td>20. &quot; Forward roll</td>
<td>From cross riding seat, forward roll to cross riding seat. Ref. VII p. 55 (5) (parallel bars)</td>
</tr>
<tr>
<td>21. &quot; Hand travel</td>
<td>Grasp rungs, travel length of ladder, legs horizontal to floor. (horizontal ladder)</td>
</tr>
<tr>
<td>22. &quot; Vault</td>
<td>Vault 5' for height. (Any kind of vault) (bucket, vaulting box, horse)</td>
</tr>
<tr>
<td>23. &quot; Leg raising</td>
<td>Hang from top bar, raise legs together horizontal to floor 20 times. (stall bars)</td>
</tr>
<tr>
<td>24. Volleyball Serve</td>
<td>Place 6' square in center of court. Serve 30', 4 out of 5 trials. Toss ball into air. Continue to keep ball in air 35 times. Ball must go at least 3' in air. 2 trials allowed.</td>
</tr>
<tr>
<td>25. &quot; Highballs</td>
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</table>
26. Track 100 yd. dash 13.5 sec. 2 trials allowed.
27. " One mile run 6 min. 30 sec. 2 trials allowed.
28. " High jump 4'5", 2 trials allowed.
30. " Broad jump Running broad jump. 15', 2 trials allowed.

SUBSTITUTE ACTIVITIES

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<td>3 min</td>
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<td>70 sec</td>
<td>75 sec</td>
<td>80 sec</td>
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REFERENCES

II. Jack, Harold K. Physical education for small elementary schools. Barnes, 1941
III. McCloy, L.L. and Anderson, D.N. Tumbling illustrated Barnes, 1936.
IV. Miller, Charles H. Physical training—practical suggestions for the instructor. Beredsitt Co., St. Louis, Mo.
V. Neilson, M.P. and Cosens, Frederick W. Achievement scales in physical education activities for boys and girls in elementary and junior high schools. Barnes, 1934.
Appendix VII

Examples of Other Classifications of Activities

Williams and Brownell

Play-games: individual, athletic sports, aquatics.
Dancing: clog, tap, natural, folk, square.
Self-testing
Fundamental skills
Outdoor activities (non-competitive)

LeFors

Aquatics
Individual sports
Team games
Gymnastics
Combative activities
Rhythms

Kabel Lee

Group team games
Individual team games
Individual sports
Miscellaneous activity other than sports

Ohio Course of Study

Athletics
Games
Stunts
Rhythms

Voltsar and Baslingow

Rhythmic activities
Team sports
Individual sports
Rumbling and stunts
Gymnastic games and relays
Individual gymnastics
Apparatus stunts
Aquatics
Combatives
Appendix VIIIa.

Date _______________________ Grade ______________________ Sex ______ Name of Teacher ______________________

<table>
<thead>
<tr>
<th>Activity</th>
<th>Specific Objectives</th>
<th>Materials and Equipment</th>
<th>Skills</th>
<th>Teaching Procedure</th>
<th>Ref.</th>
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</thead>
</table>

Note: Use back of sheet for evaluation and comment on the lesson - things you can improve next time.
Appendix VIIId.

PHYSICAL EDUCATION LESSON PLAN

Prepared by

<table>
<thead>
<tr>
<th>School</th>
<th>Class</th>
<th>Date</th>
<th>Lesson No.</th>
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**Unit**

**Objectives.**

1. 
2. 
3. 
4. 
5. 

**Materials**

**References**

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<tr>
<th>Procedure</th>
<th>Time</th>
<th>Comments</th>
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<tr>
<td>(This includes class formations and organization; goals for any particular part of the lesson; that might need description of the activity; and teaching points.)</td>
<td>(This space is used for comments and criticisms after the lesson has been taught. Should show how the development of the lesson differed from the original plan.)</td>
<td>(This space is used for comments and criticisms after the lesson has been taught. Should show how the development of the lesson differed from the original plan.)</td>
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Appendix IX

PHYSICAL EDUCATION SQUAD RATING CHART

Class ___________ Period of day _________ 6 weeks period ______ year ______

Class leader ___________________________ Asst. Class leader __________________

Six Weeks Honor Squad ________________________________

<table>
<thead>
<tr>
<th>Squad 1</th>
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<th>Days</th>
<th>Contests</th>
<th>Conduct</th>
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NOTE: Used as a motivating device only. Post on bulletin board. Use a point system for scoring and award points to squad as a whole, not to individuals.

(Good for junior high, but not so effective for senior high.)
<table>
<thead>
<tr>
<th>Squad</th>
<th>Weeks</th>
<th>Days</th>
<th>Contest</th>
<th>Conduct</th>
<th>Total</th>
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Sample Knowledge Tests

Unit: Basketball  Grade 7  Weeks 10-12

I. DIRECTIONS: Select the best answer from the following statements and place the letter designating it in the blank to the left of the statement. The first question is answered as an illustration.

2. 1. (a) one, (b) two, (c) three, (d) four, or (e) five personal fouls disqualify a player from the game.
   2. The 7th grade Achievement Standard in the accuracy shot pass is (a) one, (b) two, (c) three, (d) four, or (e) five hits in the target in five trials from a distance of 20 ft.
   3. The 7th grade Achievement Standard for free throws is (a) one, (b) two, (c) three, (d) four, or (e) five out of ten trials.
   4. A 7th grader should be able to pass a ball (a) 25, (b) 30, (c) 45, (d) 55, or (e) 65 feet to meet the standard.
   5. A (a) chest, (b) underhand, (c) overhand, (d) bounce pass is thrown with the palms of the hands finishing in an upward position.

II. DIRECTIONS: On the blank line write the word or words necessary to make the statement true.

1. It is a ____________ foul if one player pushes an opponent.
2. A player fouled in the act of shooting is given ____________ if he misses the basket.
3. A player is ____________ when any part of his body touches the side line.
4. A ____________ should be called when two or more players have a firm hold on the ball.
5. A player breaking loose for the basket should use a ____________ dribble.
6. When passing to a teammate who is not in the open you should use a ____________ pass.
7. A field goal counts ____________.
8. An intramural game should be played in _______ minute quarters.
9-10. Two types of pass that can be used in basketball are _______________ and _______________.

I f s on the manse line write this word or words.
III. DIRECTIONS: In the blank at the end of each statement in group II, write the number of the proper statement in group I.

Group I
1. Field goal
2. Double dribble
3. Tell substitute whom he is guarding
4. Free throw
5. Report to referee or umpire

Group II
1. Player entering the game
2. Player leaving the game
3. Shot awarded at result of a foul
4. Shot counting two points if made
5. Touching ball with both hands while dribbling
Appendix Xb

UNIT: Basketball  Grade 12  Weeks 10-12

I. DIRECTIONS: Select the best answer and write the letter designating it in the blank in front of the statement.

1. When your team is ahead by a few points near the end of the game it is wise to (a) shoot long shots (b) try to make as many more points as possible (c) designate a player to dribble the ball (d) make short passes to a teammate coming toward you (e) hold the ball in the back court.

2. The first overtime period is (a) one (b) two (c) three (d) four (e) five minutes long.

3. A basket is scored at the end of a game if (a) the ball goes through the basket after the gun sounds (b) if the ball is in the air when the gun sounds (c) if the time keeper says time was up before the ball left the player's hands (d) an opponent fouls before the ball leaves the player's hands (e) a teammate deflects the ball into the basket.

4. The (a) man-to-man (b) zone (c) shifting man-to-man applies the principle of guarding an area of the floor.

5. On the basketball dribble test a 12th grader should be able to complete the distance in (a) 8.5 (b) 9.5 (c) 10.5 (d) 11.5 (e) 12.5 seconds.

II. DIRECTIONS: On the blank line write the word or words necessary to complete the statement.

1. High school games are played in__________minute quarters.

2. A 12th grader should make ______out of 10 free throws to pass the achievement test.

3. A 12th grader should make ______goals in the two-minute period to pass the achievement test.

4. An alert captain will__________when the opposing team starts a rally.

5. A team using a zone defense invites the offense to make ______passes.

III. DIRECTIONS: Circle "yes" or "no" for each of the following questions.

Should an official blow his whistle:
1. When a field goal is made  yes no
2. When ball is thrown in to start second quarter  yes no
3. When gun sounds to end a quarter  yes no
4. When ball lodges in basket support  yes no
5. When ball reaches highest point on toss  yes no
6. When A2 touches ball in back court after illegal return by A1  yes no
7. When A1 has possession and touches the ball against official who is standing on the sideline  yes no
8. When ball leaves his hand on toss to start game  yes no
9. Immediately if A1 enters circle too soon on jump  yes no
10. Immediately if ball balances on basket support  yes no