

AN ABSTRACT OF THE THESIS OF

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Title: ESSENTIAL ELEMENTARY SCHOOL PHYSICAL EDUCATION
FACILITIES AS DETERMINED BY A NATIONAL SURVEY AND
A COMPARISON TO THE EXISTING FACILITIES IN OREGON

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Purpose

This study compared existing Oregon elementary school physical education facilities and equipment with those facilities and equipment items perceived to be essential for a quality physical education program by nationally selected physical education specialists.

Procedures

A survey form was mailed to 110 national educators proposed by state directors of physical education as specialists in elementary school physical education facilities and equipment. Responses were received from 89 (81 percent) of these specialists.

The survey form contained 137 items divided into six categories of the instructional complex: (1) community school area, (2) outdoor

equipment and surfacing material, (3) outdoor all-weather courts and surface areas, (4) outdoor field areas, (5) dressing-shower-locker areas, and (6) indoor instruction area, courts and equipment.

The Oregon survey form contained the items checked as essential by 50 percent or more of the national jury. The Oregon survey form was mailed to 348 elementary school principals in Oregon requesting indication whether the items were now provided in their schools. From the 348 schools, 329 principals (94.5 percent) returned the completed survey form.

Summary and Conclusions

The national jury selected 41 of the 137 items included in the survey as being essential for a quality elementary school physical education program.

On the basis of the six areas used from the national survey, the following data was obtained:

- (1) In the Community School Area, 24 percent of the Oregon elementary schools provide accessible toilet facilities.
- (2) In the Outdoor Equipment Area, 75 percent or more of the Oregon elementary schools provide climbing apparatus (94%), horizontal ladders (80%), and horizontal bars (75%). Less than 50 percent of the Oregon elementary schools included the remaining five items in the area: balance beams (13%), creative apparatus (33%), separate primary

area (42%), and interlocking rubber padding (4%).

- (3) In the Outdoor All-weather Courts Area, 85 percent or more of the Oregon elementary schools provide low organization game areas (89%), tetherball areas (95%), and asphalt (blacktop) surface for courts (87%). Less than 50 percent of the Oregon elementary schools provide volleyball courts (42%).
- (4) In the Outdoor Field Area, 68 percent of the Oregon elementary schools provide one football-soccer field space 160' x 360', and 91 percent provide permanent softball backstops.
- (5) In the Dressing-Shower-Locker Areas, 50 percent or more of the Oregon elementary schools provide a separate dressing room for both boys and girls (62%), lockers (51%), toilet facilities in the dressing room (66%), and separate shower rooms for both boys and girls (50%). Less than 50 percent of the Oregon elementary schools are providing instructor's office in the dressing area (39%), toilet facilities in instructor's office (21%), shower head at child's height (36%), and separate instructor's shower (6%).
- (6) In the Indoor Instructional Areas, 54 percent or more of the Oregon elementary schools provide separate gymnasium areas (78%), padded walls behind basketball backboards (54%), gymnasium ceiling height 22' (74%), basketball courts (88%), volleyball courts (91%), game circles and

lines (75%), tumbling area (65%), balance beams (66%), basketball backboards (89%), climbing ropes (84%), horizontal bars (64%), tumbling mats (92%), and net standards (70%). Less than 50 percent of the Oregon elementary schools provide gymnasium dividers (4%), acoustical treatment in gymnasium (49%), gymnasium size 70' x 100' (32%), adjustable basketball backboards (10%), horizontal ladders (37%), and vaulting box (24%).

Of the 41 facility and equipment items specified as essential for a quality physical education program in elementary schools by the national jury, the publication, Standards for Elementary Schools in Oregon, lists only 22 of the 41 items. Since the 1959 Oregon standards do not fit the present physical education curricular structure, there is a need to create up-to-date facility and equipment standards for improved physical education programs in elementary schools.

Essential Elementary School Physical Education
Facilities as Determined by a National Survey
and a Comparison to the Existing Facilities
in Oregon

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F. A. S.

DEDICATION

To Katy

Without your confidence, your encouragement,
your enthusiasm, and your assistance, this study
would not have been possible.

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ESSENTIAL ELEMENTARY SCHOOL PHYSICAL EDUCATION
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IN OREGON

CHAPTER I

INTRODUCTION

Without minimum playing space, teaching procedures are ineffective, activity offerings are limited, and optimum growth and development of children are usually restricted (20, p. 72).

The public increasingly questions the validity of educational expenses and consequently demands evidence of educational attainment in all phases of the public school curriculum. Generally speaking, most persons accept the requirement of physical education for their children and will approve the necessary facilities to conduct the program if the program demonstrates merit. Unfortunately, however, programs of instruction often are attempted before adequate instructional facilities are made available (2, p. 13, 82).

Need and Importance of the Study

The availability of building standards for Oregon elementary school physical education facilities and equipment are severely lacking, outmoded, and irrelevant to today's physical education curriculum. The needs for this study are based on the following:

1. The standards for Oregon elementary schools were developed in 1959 and do not fit the present curriculum structure.
2. The insistence by the State Department of Education upon accountability and performance competencies by the fall of 1974.
3. The scarcity of specific standards due to the lack of recent research in this area.
4. The need to create acceptable standards for essential facilities and equipment to fit a quality physical education program.
5. The need to challenge the tendencies to provide the space to fit sport's rules instead of physical education activities.
6. The need to determine whether or not the community school concept is in enough demand to change the specifications for what are considered essential facilities and equipment to fit a quality physical education program.

Since the nature of physical education facilities determines the quality of the program, the lack of sufficient facilities often turns the program into a presentation of limited instructional value. In addition, when teacher interest to provide excellent programs degenerates to the point where the attitude of the pupil is effected, the purposes of the instructional program are defeated. In too many schools the result is a play-time, throw-out-the-ball type of

physical education offering. Vannier and Foster explain the problem this way:

Usually physical education classes are held in a gymnasium or outside on a play field. Most public schools are fortunate enough to have one or the other. Schools that use a playground for outdoor activities and a gymnasium for physical education class work usually have the best programs. The use of the classroom, auditorium, stage, or school corridor has been found to be inadequate and result in a makeshift program fitted into makeshift space (37, p. 32).

Authorities in the field of physical education have expressed concern for providing adequate facilities for the physical education instructional program. Regardless of the age group involved, particular physical education activities require specific facilities. Whether the facilities are indoor or outdoor, instructional areas must be appropriate for the specific activities which are taught.

Current elementary school physical education programs are being called upon to provide instructional activities which are designed to achieve space awareness, perceptual development, high locomotor skill development, and increased physical fitness. Activities to achieve these purposes are deemed important to growing children and are believed to prepare the young for a more healthy and productive life in later years. Lack of instructional facilities limits the purposes of physical education programs to being little more than recess periods.

The quality of elementary physical education programs is determined by what is being offered to the child, the preparation of the teacher, activity situation, evaluation, teacher load and time allotment, as well as by equipment and facilities that are available (26).

Nature and Purpose of the Study

This study compares existing Oregon elementary school physical education facilities with those facilities perceived to be essential as specified from a survey of nationally selected physical education experts. The following steps were involved in this study:

1. Prepare a listing of facilities standards from the literature.
2. Develop a survey form to be used with the national jury.
3. Select a local jury to screen the survey form for inclusion, deletion, and appropriateness of the form.
4. Select a national jury.
5. Submit the survey form to the national jury.
6. Compile the results from the national jury into the survey form to be used in Oregon.
7. Submit the Oregon survey form to selected Oregon elementary school principals.
8. Collect and compile the results received from the Oregon principals.

Limitations and Assumptions of the Study

The limitations and the assumptions of this study are noted as follows:

1. Individuals selected on the national level were limited to persons recommended by state directors of physical education.
2. It was assumed that the individuals recommended for the national jury possessed expertise in elementary school physical education facilities.
3. The school size was set from 350 ADM - 600 ADM for both the national survey and the Oregon study. This school size was selected because these schools were not too small nor too large for comparative analysis.
4. It was assumed that the Oregon principals were knowledgeable of the existing physical education facilities in their respective schools.
5. It was also assumed that the national sample was sufficiently large to offset the factor of climate and geographic location in assessing facility and equipment needs.

Definition of Terms

Terms used in this study are defined as follows:

Populations:

- a. National - The individuals selected from each state as suggested by the state directors of physical education,
- b. State - Principals of schools in Oregon with an ADM of 350 - 600.

Average Daily Membership (ADM): The average daily membership of a school. This figure is determined by the number of students enrolled in the school rather than the number of students who attend on each day.

Facilities: Those areas used for physical education instruction or play that have been provided in the school for specific physical education uses. In this case, facilities refer to outdoor playgrounds and fields as well as indoor areas in the school building, including the shower and dressing areas.

Equipment: Apparatus that is used on the playground and in the building for the purpose of physical education instruction or play. Equipment refers to items which are permanent and often attached or imbedded in ground or walls for stability.

Essential: A term designating a facility or equipment item which is necessary for a quality physical education program. If the facility or equipment item is not available in the school, the instructional program will be significantly altered.

Minimum: The lowest level of facilities and equipment that must be provided so that the physical education program may function. In certain areas of physical education, minimum facilities and equipment are required for parts of the program to exist.

Adequate Physical Education Program: The provision of instructional activities, supplies, facilities, and equipment necessary to conduct a physical education program to meet the standards established by the state and meeting the professional group recommendations.

Quality Physical Education Program: A program provided for the child that contributes to the goals of the total education program of which it is a part. A quality program realizes those objectives concerned with the development of favorable self-image, creative expression, motor skills, physical fitness, knowledge and understanding of human movement (26).

Likert-Type Scale: A type of summated scale where the subjects are asked to respond to each item in terms of several degrees of agreement or disagreement.

Rating Scale on Survey: The range of responses were selected to provide variation in provision of facilities and equipment for an elementary school physical education program. Distinctions were chosen based on the following categories:

- a. Essential - required for a quality program.

- b. Usually Important - contributes to a quality program but not essential.
- c. Some Importance - could be of value in the program if available but not considered important.
- d. Seldom Important - Could be of value in a few cases but of little importance.
- e. Not Needed - item does not contribute to a quality program.

Local Jury: Term used to designate eleven colleagues in Oregon who reviewed the first draft of the national survey form for clarity of meaning and addition or exclusion of items in the different categories.

Authorities: Term applied to authors of the professional literature relating to physical education facilities and equipment.

CHAPTER II

REVIEW OF THE LITERATURE

Standards for elementary school physical education facilities were developed from a review of professional publications. The resultant criteria were grouped under the following ten headings: community school; outdoor equipment; material under apparatus; outdoor all-weather courts; court surface material; outdoor field areas; dressing, shower and locker areas; indoor instruction areas; indoor court areas; and indoor equipment. In each category, specific standards indicated in the literature are noted and these standards formed the basis for the survey form used in the study.

Community School

The Athletic Institute (2, p. 5) reports that the community school concept has developed over the years and considerable concern is expressed for planning the school site and facilities to serve the interest and needs of all people--students and citizens alike. It is recommended that consideration should be given to meeting the special needs of persons of all ages and both sexes who live in the community. The Athletic Institute proposes that the ideal neighborhood unit is a combination community park-playground and

elementary school site (2, p. 9). The report also states that most parks include picnic areas with tables and benches as well as general features such as a swim pool, wading pool, and building accessibility (2, p. 20). The use of the school facilities and grounds for summer recreation and year-round public use has been reported for many years (38, p. 255-258). Equipment specification for installed items should be determined by the needs and desire of the local community and its citizens (37, p. 55-56).

If the community school concept is generally supported throughout the nation, then geographic location will influence the selection of facilities for school sites. As determined from the literature, the following features should be included in the community-school area for an elementary school:

1. community-park school
2. accessible toilet facilities
3. picnic area including benches and tables.
4. pre-school play lot area
5. swim pool
6. wading pool area
7. outdoor ice skating rink

Outdoor Equipment

Outdoor equipment refers to the permanent items needed for physical education programs which are located on playgrounds and instructional areas adjacent to the school building. Safety factors

for each item must be considered in the selection of outdoor equipment (9, p. 33-35). Fait (13, p. 94-96) notes the need for specific instructional equipment for movement and fitness. Schurr (30, p. 112-116) observes that improvised equipment as well as manufactured items can provide opportunities for the exercise needed for student physical development. Van Hagen (38, p. 86-93) details the importance of outdoor equipment being used for play and recreation as well as for instructional purposes.

Authorities are consistent in their recommendations for equipment provided for the outdoor playground. They also note the need to provide equipment both for instruction and for physical development. Geographic area and economic conditions of the community may dictate the equipment needed for local programs (20, p. 75-76).

There is a program in Lake City, Florida, designed for local community as well as school use and is federally funded (34, p. 52). Lake City provided outdoor equipment for a challenge course, or obstacle course, bringing into focus the importance of equipment necessary for physical development. The local jury also recommended incorporating this same type of equipment into the survey part of the study.

Equipment on the playground which is not used for physical development is viewed by some authorities as being unnecessary. Dauer (9, p. 34) and Schurr (30, p. 112) do not recommend

equipment which is designed only to "sit and ride." Their position is that community recreation rather than education is the purpose for inclusion of "sit and ride" equipment. The playlot for younger children in the neighborhood school and also the community playground adjoining the school grounds, are two places where "sit and ride" types of equipment logically might be installed (2, p. 19-23).

Reference in the literature and recommendations from the local jury lead to the selection of the following outdoor equipment items to be included in the survey:

- | | |
|-------------------------------------|------------------------------------------------------|
| 1. balance beams. | 9. parallel bars |
| 2. climbing apparatus - 9' or under | 10. separate primary area with equipment. |
| 3. climbing poles | 11. separate primary equipment without separate area |
| 4. creative apparatus | |
| 5. horizontal ladders | 12. rings |
| 6. horizontal bars | 13. slides |
| 7. merry-go-round | 14. swings |
| 8. obstacle course | 15. teeter-totters |

Material Under Apparatus

A variety of surfacing materials is recommended by authorities to be used under equipment. Of greatest importance in selecting surfacing materials is safety (23).

The Department of Education in Maine (15) stresses the importance of the potential safety hazards in the schools. Several references, Athletic Institute (2, p. 16, 78-80), Vernier (39), Schurr (30, p. 112), Vannier and Foster (37, p. 60), all stress the importance of appropriate ground coverage under the playground equipment. It is recommended that coverage be pliable and resilient whenever possible. Materials such as sawdust, sand, or dust-treated dirt are less costly, but these materials are more difficult to keep in place. Regardless of the material used, the area must be as safe and healthful as possible for children.

Material used under the play equipment as referred to in the sources listed above was included in the survey form as follows:

- | | |
|------------------------------------------------------|-----------------------------|
| 1. asphalt | 6. interlocking rubber pads |
| 2. concrete | 7. rubber pellets mixed |
| 3. soil (without grass) | with asphalt |
| 4. sand | 8. synthetic turf |
| 5. ground wood product, i. e.
sawdust or shavings | |

Outdoor All-Weather Courts

Space provided for outdoor courts is dependent upon several factors, including geographic location and the degree of community involvement (20, p. 76). The important factors in determining the

size of the surfaced area are (1) projected student enrollment, (2) nature of the physical education program, and (3) staff involvement in facility development. Standards have been developed for the size of the specific spaces with each activity area containing its own special requirement (2, p. 18). Area size, also, is regulated by game rules. A detailed reference on court sizes is published by the California State Department of Education (29, p. 21-34). The Massachusetts Association for Health, Physical Education, and Recreation (22) has developed recommendations for facilities and specifications for varying student enrollment and geographic conditions.

The following all-weather court areas were recommended by the resources listed above and were selected to be included in the survey:

- | | |
|---------------------------|----------------------------|
| 1. badminton courts | 5. shuffleboard courts |
| 2. basketball courts | 6. rollerskating area with |
| 3. low organization game | smooth surface |
| areas (circles, lines, | 7. tennis courts |
| and other markings) | 8. tetherball areas |
| 4. handball (single wall, | 9. volleyball courts |
| and rebound wall) | 10. parking on courts |

Outdoor Field Areas

Standards for outdoor field space have been calculated by the

National Council on Schoolhouse Construction (16) and have been accepted by authorities as appropriate for acreage per number of children. The acreage recommended for elementary schools is a minimum of 10 acres, with one additional acre for every 100 pupils. If the school area is to be used as a community park, then the minimum area is increased to 20 acres. The number of soccer and football fields as well as softball space and track areas is listed in various perspectives. Similar listings are given in the site analysis guide issued by the California State Department of Education (29, p. 22-29). Lists are prepared by many state departments to fit local conditions and physical education programs, as well as local community interest in combined community-school function. When the school grounds are to be used for community parks, as well as school activities, then the acreage required is greater (2, p. 13, 19-20).

The Athletic Journal (3, p. 86) recommends the use of black-top runways with the elementary school track area. The need for dry surfaces in the track area is sometimes met by using the parking lot or surfaced game court areas as runways for the long-jump and activities requiring take-off spaces.

Within the last few years, attention has been brought to bear on providing running space for boys and girls in track and field. Authorities agree with the Athletic Institute (2, p. 42) on what spaces should

be provided: A 440-yard or 220-yard track, as well as appropriate runways for the high jump, long jump, and polevault. Each of these activity areas possess requirements in size and structure.

Synthetic surfacing for track areas is being recommended by some authorities, and has been installed in several complexes with favorable results (4). The installation of synthetic tracks is often held back due to the high cost factor. Some authorities believe it will require more time before synthetic material becomes readily available for use in the public schools.

Suggested field areas listed in related literature vary considerably depending upon school size and geographic location. The following areas listed in the related literature referred to above are proposed to the national jury for selection:

- | | |
|------------------------------|-------------------------|
| 1. one football soccer field | 6. track and field area |
| 2. softball diamond | a. discus area |
| 3. permanent softball back- | b. high jump area |
| stops | c. long jump pit |
| 4. portable softball back- | d. pole vault area |
| stop | e. shot put area |
| 5. track area for running | |

Dressing, Shower, and Locker Areas

The inclusion of offices, showers, lockers and dressing rooms for the elementary school is now being accelerated by the trend of hiring physical education specialists to teach elementary physical education (9, p. 32). Facilities such as lockers, locks, benches, and clothes racks in the dressing rooms go with the added need for shower rooms and towel rooms with specifications which are most appropriate for the elementary school-age child (37, p. 54-55). Most specifications for these facilities have been a direct result of material compiled by the American Association for Health, Physical Education, and Recreation and published by the Athletic Institute (2, p. 149-151).

The Council on Facilities, Equipment and Supplies (8) has published a handbook through the American Association for Health, Physical Education, and Recreation that is an addition to the facilities guide prepared by the Athletic Institute and indicates the most recent trends for facilities. These trends depict the use of the most recent innovations of materials, equipment and appropriate use of available space. The following items have been selected from the related literature listed above and are to be included in the national survey:

- | | |
|-------------------------------------------------------|-----------------------------------|
| 1. separate dressing rooms
for both boys and girls | 5. towel storage |
| 2. baskets | 6. drying area |
| 3. storage for clothing | 7. instructors' offices |
| a. benches and hooks | a. toilet facility |
| b. lockers | b. separate shower |
| 4. toilet facilities | 8. shower area |
| a. in dressing room | a. shower head at child
height |
| b. apart from dressing room | b. shower head at adult
height |

Indoor Instructional Areas

The need for floor space to teach physical education to elementary boys and girls is a problem of concern to elementary school administrators today. The physical structure of the elementary school displays the school's philosophy toward its instructional program. The inclusion or exclusion of facilities regulates the expansion of a specific program as noted in a state bulletin:

The physical environment is considered to be vitally linked to success of the educational program, and that which requires a minimum of body energy for adaptation and thereby releases a maximum amount of energy for purposeful living is considered the best educational environment (27, p. 62).

Whatever the physical environment may be, there is

considerable concern expressed by authorities in the field on what is to be included in the school facility (14, p. 48). Since the construction of the building controls the features to be provided inside its walls, it is necessary to establish what items are considered to be most essential. The items proposed in the related literature are as follows:

- | | |
|-----------------------------------------|---------------------------------------|
| 1. Indoor instructional characteristics | 2. Size of indoor instructional areas |
| a. separate gymnasium | a. 40' x 60' |
| b. gymnasium-auditorium | b. 50' x 75' |
| c. gymnasium-cafeteria | c. 54' x 90' |
| d. gymnasium divider | d. 62' x 100' |
| e. acoustical treatment | e. 70' x 100' |
| f. portable stage | 3. Ceiling height |
| g. padded walls behind backboards | a. 18' |
| h. separate primary space | b. 20' |
| i. permanent stage | c. 22' |
| j. bleacher seating | |
| k. public address system | |

Indoor Court Areas

The gymnasium in a modern elementary school-neighborhood center serves pupils for physical education classes and after-school activities. The gymnasium is also the focal point for a large part of the community evening recreation program. It is perhaps the most extensively used space in an elementary school (14, p. 57). With this in mind it is necessary to establish which court areas should be included in an elementary school. The following items are proposed for indoor court areas:

1. basketball
2. volleyball
3. badminton
4. game circles and lines
5. shuffleboard
6. dance area
7. adaptive area
8. weight room
9. gymnastics area
10. wrestling
11. tumbling area

Indoor Instructional Equipment

The instructional areas that were listed above also require the necessary equipment to be available for instructional purposes. Authorities in the field propose numerous pieces of equipment for instructional purposes. This equipment is listed as follows:

- | | |
|--------------------------|-------------------------------|
| 1. balance beam (high) | 11. parallel bars |
| 2. balance beam (low) | 12. peg board |
| 3. basketball backboards | 13. stall bars |
| 4. basketball hoops | 14. rings |
| a. 8' high | a. still |
| b. 9' high | b. traveling |
| c. 10' high | 15. trampoline |
| 5. benches | 16. mats |
| 6. bouncing planks | a. tumbling |
| 7. cargo nets | b. wrestling |
| 8. climbing apparatus | 17. vaulting |
| a. poles | a. box |
| b. ropes | b. buck |
| c. frames | 18. net standards |
| 9. horizontal bar | 19. spring board |
| 10. horizontal ladder | 20. weight training equipment |

The gymnasium for the elementary school has been the subject of discussion in recent years by authorities in the field because of its size and shape. An educational leader (36) has questioned the professional people of the American Association for Health, Physical Education, and Recreation as to the purpose of building all gymnasiums in a rectangular shape. In reference to gymnasiums which

could be round instead of square or rectangular, the Educational Facilities Laboratories has designed one in the shape of a "bubble". This is an air structure made of plastic and quite reasonable in price compared to the conventional materials (1). Plastics are beginning to become more practical for construction and are readily available in the form of foam and spray-on materials. P. Richard Theibert (35) has been working with Educational Facilities Laboratories and the American Association for Health, Physical Education, and Recreation in the feasibility of using these materials for building physical education facilities. Theibert explained the various systems now being used to "spray-foam" over a bubble to develop the walls and ceiling for ice rinks and recreational buildings (7).

The indoor instructional areas are not determined by school use alone, but by the extent of community use as well (2, p. 82-89). Along with the instructional space must be the consideration of the courts to be included, and the arrangement or selection of the desired equipment to fit the facilities (14, p. 50-66).

Using the gymnasium as a cafeteria is not recommended by most authorities. Dauer explains the objection this way: "The combination gymnasium-auditorium-cafeteria facility leaves much to be desired, creating more problems than it solves. Labeled a 'multi-purpose room' a better term probably would be 'multiuseless' " (9, p. 32-33).

A review of the literature related to physical education facilities or equipment reveals a dearth of material on this subject. However, a look at the literature that is available provides some background for each of the six areas of concern.

CHAPTER III

METHOD AND PROCEDURE

This chapter presents the methods used in preparing the check list for facilities and equipment standards, developing the survey form for the national jury, screening the survey form by a local jury, and selecting the populations on the national and state levels. The survey form was developed for the national population and compiled so that the Oregon survey could be conducted. The statistical methods used for the evaluation of these data will also be presented.

Development of the Instrument

A pilot survey form (see Appendix H) for national distribution was prepared to be inclusive of facilities and equipment that have been used or recommended for use by authorities in the field of physical education for many years (38, p. 76-119; 2, p. 16, 20, 36-62, 82-100). This survey form was sent to eleven selected colleagues for their suggestions and comments concerning the items to be included and their clarity of meaning. The final survey form was not complete until these individuals had expressed their

opinions and made their suggestions for items to be included or excluded from the survey form.

Since part of this study is concerned with the current facilities in the state of Oregon as they relate to what is thought to be essential from the national survey, some items included in this national survey study were based upon the existing standards for elementary schools in Oregon (33). Universal concern for the safety features of all equipment and facilities required the inclusion in the national survey form those items that contribute to accident prevention.

To provide continuity of the items with respect to both indoor and outdoor areas the survey form was divided into six parts. This division should assist the individuals using the survey form in keeping the selection of equipment and facilities separated. This form of separation is suggested in the related literature as was listed above.

- I. Community School Area
- II. Outdoor Equipment
- III. Outdoor All-Weather Courts
- IV. Outdoor Field Areas
- V. Dressing, Shower, Locker Areas
- VI. Indoor Instruction Areas

These six categories were separated according to use and location of respective facilities and equipment. They are concerned with the following aspects:

Part I Community School Area

The community school area is recommended by authorities in the field of physical education and recreation to be a facility made available for all people in the local community. This facility should be used and be made available for many groups other than for school groups only. The accessibility to the grounds, the building and surrounding areas should be coordinated by the school district and the local park district so that complete utilization of all facilities and equipment can be realized.

The following items in this category are to be included in the national survey as recommended in the previously stated literature:

- | | |
|----------------------------------------------|-----------------------------|
| 1. community park school | 4. preschool play lot area |
| 2. accessible toilet facilities | 5. swim pool |
| 3. picnic area, including benches and tables | 6. wading pool area |
| | 7. outdoor ice skating rink |

Part II Outdoor Equipment and Surfacing Materials

A. Equipment

The outdoor equipment being provided on the elementary school grounds has been a mixture of recreational equipment and physical education equipment. Research supports both

types as acceptable depending upon the purpose of the facility. The equipment list that follows is a combination of both recreation and development pieces.

The following items are included in the survey study for this area:

- | | |
|--------------------------------------|------------------------------------------------------|
| 1. balance beams | 9. parallel bars |
| 2. climbing apparatus - 9' and under | 10. separate primary area with equipment |
| 3. climbing poles | 11. separate primary equipment without separate area |
| 4. creative apparatus | |
| 5. horizontal ladders | 12. rings |
| 6. horizontal bars | 13. slides |
| 7. merry-go-round | 14. swings |
| 8. obstacle course | 15. teeter-totters |

B. Surfacing Material

Most serious accidents in the elementary school physical education program are attributed to the outdoor equipment and the surfacing under the equipment. This study will attempt to determine what the experts claim as the most appropriate surfacing material essential to a quality physical education program.

The following items are those mentioned in the previously

referred to resource literature and are to be included in the survey study.

- | | |
|-------------------------|-----------------------------------------|
| 1. asphalt | 5. ground wood product, i. e. |
| 2. concrete | sawdust or shavings |
| 3. soil (without grass) | 6. interlocking rubber pads |
| 4. sand | 7. rubber pellets mixed with
asphalt |
| | 8. synthetic turf |

Part III Outdoor All-Weather Courts and Court Surface Areas

A. Outdoor All-Weather Courts

The outdoor court areas are often dictated by the climatic conditions and terrain available for these courts. However, there seem to be certain kinds of courts or areas that are considered essential for running a quality physical education program. The most recent literature makes reference to outdoor all-weather courts that are recommended to fit in this category.

The following items are included in this part of the survey study:

- | | |
|---------------------------------------|--------------------------|
| 1. badminton courts | 3. two basketball courts |
| 2. one basketball court
(50 x 100) | (100 x 100) |

- | | |
|-----------------------------------------------------------------------|-----------------------------------------------|
| 4. three basketball courts
(150 x 100) | 8. shuffleboard courts |
| 5. four basketball courts
(200 x 100) | 9. roller skating area with
smooth surface |
| 6. low organization games,
(circles, lines, and
other markings) | 10. tennis courts |
| 7. handball (single wall
and rebound wall) | 11. tetherball areas |
| | 12. volleyball courts |
| | 13. parking on courts |

B. Court Surface Areas

The type of surfacing that has been most useful and is considered to be essential by most resources for a quality physical education program in the elementary school is somewhat controversial. The available literature regarding this subject lists four items as most commonly used.

The following items are included in this category of the survey study;

- | | |
|-----------------------|-----------------------|
| 1. asphalt (blacktop) | 3. stabilized soil |
| 2. concrete | 4. synthetic material |

Part IV Outdoor Field Area

The sizes and shapes of elementary school grounds are as varied as there are schools, however, the uses of these grounds and

certain field areas tend to be uniform.

In some areas there is a greater demand for field space because of extra-curricular activities, and in these cases the facilities are adequate. The related literature regarding multi-field areas consider some areas to be most essential over other areas to run a quality physical education program in the elementary schools.

The following items have been selected from these references to be included in this survey study;

1. one football-soccer field space 160' x 360'
2. two football-soccer field spaces 320' x 360'
3. three football-soccer field spaces 480' x 360'
4. one softball diamond 150' x 150'
5. two softball diamonds 300' x 150'
6. three softball diamonds 450' x 300'
7. four softball diamonds 600' x 300'
8. permanent softball backstop
9. one portable softball backstop
10. 220-yard permanent track
11. field space for 220-yard oval track
12. 440-yard permanent track
13. field space for 440-yard oval track
14. discus area
15. high jump area

16. long jump pit
17. pole vault area
18. shot put area

Part V Dressing, Shower, Locker Areas

The demands placed upon the school's physical education facilities for adult use, as well as, program innovations are requiring different supportive facilities such as dressing rooms, restrooms, and locker areas. The related literature associated with this area is favorable toward the most complete facility that can be provided.

The following items have been selected from the related literature to be included in this survey study:

1. separate dressing rooms for boys and girls
2. baskets for gym clothing
3. clothes hooks with benches
4. lockers
5. toilet facilities in dressing room
6. toilet facilities separated from dressing room
7. towel storage and checkout room
8. drying area for use after shower
9. instructors' offices
10. toilet facility in instructors' office
11. separate shower rooms for both boys and girls

12. shower head at child height
13. shower head at adult height
14. separate instructors' showers

Part VI Indoor Instruction Areas, Courts and Equipment

The sizes and features of indoor physical education facilities are described in the related literature and vary considerably. The items that were found to be recommended in the related literature have been included in the survey study and are listed below;

A. Instructional Areas

1. separate gymnasium area
2. gymnasium-auditorium combined
3. gymnasium-cafeteria combined
4. gymnasium divider to locate two teaching stations
5. acoustical treatment in gymnasium
6. portable stage for gymnasium
7. padded walls behind basketball backboards
8. separate gymnasiums space for primary program
9. permanent stage connected to gymnasium
10. bleacher seating provided
11. public address system provided
12. gymnasium size 40' x 60'
13. gymnasium size 50' x 90'

14. gymnasium size 54' x 90'
15. gymnasium size 62' x 100'
16. gymnasium size 70' x 100'
17. gymnasium ceiling height 22'
18. gymnasium ceiling height 20'
19. gymnasium ceiling height 18'

B. Court Areas

The following areas are recommended by authorities in physical education and are referred to in related literature to be most essential for a quality physical education program in the elementary school:

The items listed below are included in the survey study.

1. basketball area
2. volleyball area
3. badminton area
4. game circles and lines area
5. shuffleboard area
6. dance area
7. adaptive area
8. weight room area
9. gymnastics area
10. wrestling area
11. tumbling area

C. Equipment

The location and inclusion of physical education equipment are determined by the program, the recreational use and the extracurricular emphasis. Literature referring to the specific equipment for the elementary school does not single out any definite guideline that can be followed. It was found that the most appropriate method of selecting equipment was to list all the items mentioned in the literature and let the national jury make the decisions about importance.

The following items were selected for the survey study:

1. balance beam (high)
2. balance beam (low)
3. basketball backboards
4. basketball hoops 8' high
5. basketball hoops 9' high
6. basketball hoops 10' high
7. adjustable basketball hoop
8. benches
9. bouncing planks
10. cargo net
11. climbing poles
12. climbing ropes

13. climbing frame (portable and adjustable)
14. horizontal bar
15. horizontal ladder
16. parallel bars
17. peg boards
18. stall bars
19. still rings
20. traveling rings
21. trampoline
22. tumbling mat
23. wrestling mat
24. vaulting box
25. vaulting buck
26. net standards (multiple use)
27. spring board
28. weight training

The selection of the specific items to be included in the survey was completed by the use of references in the related literature. This list was submitted as a pilot survey to eleven colleagues for refinement. With the resulting changes, the instrument was developed into the national survey form (see Appendix J).

National Survey Form

The national survey form was put into its final order following the recommendations of the local pilot jury. It was considered advisable by the local jury that a point system be employed which could place a value on each selected rating. The Likert type rating scale was recommended because it places a value on each selection as well as a description of the rating classification.

The latitude of responses was limited to five and were used in the survey form as follows:

<u>Rated Value</u>	<u>Response Category</u>
5	-- <u>Most Essential</u> = required for a quality program
4	-- <u>Usually Important</u> = contributed to a quality program, but not essential
3	-- <u>Some Importance</u> = could be of value in the program if available but not considered essential
2.	-- <u>Seldom Important</u> = could be of value in a few cases but of little importance
1	-- <u>Not Needed</u> = item does not contribute to a quality program

The selection of items to be considered for a quality program in elementary physical education required the opinion of the jury for the highest category rating; therefore, the most essential column was rated with the number five in the scale. Regardless of the number of points needed to rate the item or area as essential it was necessary to establish a point where the area was receiving the majority of emphasis. With the majority being used as the basis for selection it was then necessary to establish a frequency distribution of each item being evaluated. All items that were marked in the most essential category by 50 percent or more of the evaluators would be considered in the majority class and would be selected to be used in the Oregon survey.

Populations

The populations refer to the individuals contacted to assist in this study on both the national and the Oregon levels.

National

With the forementioned approach in mind, contact was made with the Elementary Physical Education Consultant of the American Association for Health, Physical Education and Recreation Office in Washington, D. C., (see Appendix A) to secure the names of state

directors of physical education or persons who are responsible for overseeing those programs and accountable to their respective state departments of education. The person so designated from each of the 50 states was written a personal letter (see Appendix B) requesting his or her assistance in designating individuals within their state who are recognized as authorities in the field of elementary school physical education facilities and equipment.

The persons designated as administrators in each state responded with names of specialists who were identified as the national experts for the study.

An individual typewritten letter (see Appendix E) was addressed to each of the individuals who were recommended by their state directors as being experts in their state regarding facilities and equipment for elementary physical education programs. This letter requested their assistance in this study. There were one hundred and twenty-five persons recommended to be contacted for this purpose. A postcard (see Appendix G) was included with the letter for acknowledgement and for consent to be participants in this study.

Oregon

The Oregon population of this study was composed of all principals of elementary schools (grade one to six) with ADM of 350 to 600. These participants represented that segment of the

population which provided the data to indicate present equipment and facilities in Oregon elementary schools. Through the cooperation of the State Board of Education in Salem, Oregon, the Oregon schools having an enrollment of 350 to 600 ADM were contacted and a personal letter (see Appendix K) was sent to each principal requesting his assistance in providing the necessary information for the survey.

Oregon Survey Form

The Oregon survey was composed of those items from the national survey which had been perceived by more than 50 percent of the national jury as essential to a quality physical education program for the elementary schools. Since the Oregon survey was a direct result of the national survey, it was necessary to include the same six categories (Parts I to VI) as were used in the national survey.

The items used in the Oregon survey were to be answered by the building principal of schools 350-600 ADM, as to whether the equipment and facilities existed or did not exist at his school. This response was facilitated by a simple yes () or no () answer (see Appendix L).

The items used in the Oregon survey--those items receiving essential ratings by 50 percent or more of the national jury--are as follows:

Part I Community School Area

Accessible toilet facilities was the only item above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: community park school; picnic area, including benches and tables; preschool play lot area; swim pool; wading pool area; outdoor ice skating rink.

Part II Outdoor Equipment and Surfacing Material

A. Outdoor Equipment

Balance beams, climbing apparatus - 9' or under, creative apparatus, horizontal ladders, horizontal bars, and separate primary area with equipment were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: climbing poles; merry-go-round; obstacle course; parallel bars; separate primary equipment without separate area; rings; slides; swings; teeter-totters.

B. Surfacing Material Under Apparatus

Interlocking rubber pads was the only item above 50 percent in the most essential category. The following items did not survive the national jury selection as being

considered most essential: asphalt; concrete; soil (without grass); sand; ground wood product, i. e., sawdust or shavings; rubber pellets mixed with asphalt; synthetic turf.

Part III Outdoor All-Weather Courts and Court Material

A. Outdoor All-Weather Courts

Low organization game areas (circle, lines, and other markings), tetherball areas, and volleyball courts were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: badminton courts; one basketball court (50 x 100); two basketball courts (100 x 100); three basketball courts (150 x 100); four basketball courts (200 x 100); handball (single wall, and rebound wall); shuffleboard courts; roller skating area with smooth surface; tennis courts; parking on courts.

B. Court Surface Area

Asphalt (blacktop) was the only item above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: concrete; stabilized soil; synthetic.

Part IV Outdoor Field Areas

One football-soccer field space (160 x 360), and permanent softball backstops were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: two football-soccer field spaces (320 x 360); three football-soccer field spaces (480 x 360); one softball diamond (150 x 150); two soft-ball diamonds (300 x 150); three softball diamonds (450 x 300); four soft-ball diamonds (600 x 300); one portable softball backstop; 220 yard permanent track; field space for 220 yard oval track; 440 yard permanent track; field space for 440 yard oval track; discus area; high jump area; long jump area; pole vault area; shot put area.

Part V Dressing, Shower, Locker Area

Separate dressing rooms for both boys and girls, lockers, toilet facilities in dressing room, instructors' office, toilet facility in instructors' office, separate shower rooms for both boys and girls, shower head at child's height, and separate instructor's showers were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: baskets for gym clothing; clothes hooks with benches; toilet facilities separated

from dressing room; towel storage and checkout room; drying area for use after shower; shower head at adult height.

Part VI Indoor Instruction Areas, Courts and Equipment

A. Instruction Areas

Separate gymnasium area, gymnasium divider to locate two teaching stations, acoustical treatment in gymnasium, padded walls behind basketball backboards, gymnasium size 70 x 100, and the gymnasium ceiling height of 22' were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential:

gymnasium-auditorium combined; gymnasium-cafeteria combined; portable stage for gymnasium; separate gymnasium space for primary program; permanent stage connected to gymnasium; bleacher seating provided; public address system provided; gymnasium size (40 x 60); gymnasium size (50 x 75); gymnasium size (54 x 90); gymnasium size (62 x 100); gymnasium ceiling height 20'; gymnasium ceiling height 18'.

B. Court Areas

Basketball area, volleyball area, game circles and lines

area, and tumbling area were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: badminton area; shuffleboard area; dance area; adaptive area; weight room area; and gymnastics area.

C. Indoor Equipment

Balance beam (low), basketball backboards, adjustable basketball hoop, climbing ropes, horizontal bar, horizontal ladder, tumbling mat, vaulting box, and net standards (multiple use) were the items to score above 50 percent in the most essential category. The following items did not survive the national jury selection as being considered most essential: balance beam (high); basketball hoops 8' high; basketball hoops 9' high; basketball hoops 10' high; benches; bouncing planks; cargo net; climbing poles; climbing frame (portable and adjustable); parallel bars; peg boards; stall bars; still rings; traveling rings; trampoline; wrestling mat; vaulting buck; spring board; weight training equipment.

CHAPTER IV

ANALYSIS AND DISCUSSION OF DATA

This study was divided into two distinct categories. The first was used to establish a list of items considered essential for an elementary school physical education program as perceived by selected specialists on the national level. The second category was devised to determine what facilities and equipment considered to be essential by the national jury were being provided in the Oregon elementary schools.

National Survey

Of the 50 state directors contacted concerning the selection of specialists in this field, 44 directors responded. From the 44 responses, 125 persons were identified as experts in elementary physical education facilities. Of these 125 specialists, 110 consented to participate as a jury in the study. The survey form was mailed to the 110 consenting members on the national jury and 89 survey forms were returned for an 81 percent response.

Each item was marked as the specialist considered its importance to the elementary school physical education program. It was found during the compilation of the returned survey forms that some

of the items were left unmarked; therefore, an additional column was added and labeled as "O" to include the total of the unmarked items. A frequency distribution table was made for the columns and the percentage of responses in each column was established.

To be included in the Oregon survey, an item needed to be checked as essential by at least 45 respondents (50 percent or more). Those items marked by an asterisk (*) on the tables were extracted from the results and were used for the Oregon survey.

Part I Community School Area

Of the seven different items relating to the community school the only item to be selected as essential was accessible toilet facilities. Table 1 shows this item received a 78.65 percent rating while all remaining fell below the 50 percent acceptance level.

The ranking of other items in this category showing a relatively high acceptance level were the community park school and the pre-school play lot area. The remaining items show less acceptance in the essential category.

Table 1. Frequency Distribution of Items for a Community School as Rated by 89 Physical Education Specialists.

Community School Area Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1		0	%
1. Community Park School	38	42.73	31	34.83	13	14.60	4	4.48	0	0	3	3.36
*2. Accessible toilet facilities	70	78.65	12	13.48	3	3.39	1	1.12	0	0	3	3.36
3. Picnic area including benches and tables	5	5.60	25	28.09	32	35.97	15	16.85	10	11.25	2	2.24
4. Preschool play lot area	41	46.07	28	31.46	11	12.39	4	4.48	4	4.48	1	1.12
5. Swim pool	25	28.09	30	33.74	25	28.09	1	1.12	6	6.72	2	2.24
6. Wading pool area	10	11.22	24	26.96	31	34.86	11	12.36	13	14.60	0	0
7. Outdoor ice skating rink	9	10.14	22	24.71	20	22.47	18	20.22	18	20.22	2	2.24

*Indicates items to be used in the Oregon survey.

Part II Outdoor Equipment and Surfacing Material

A. Equipment

Of the 15 items included in the outdoor equipment area only six items were chosen by the national jury as being essential. The balance beam, climbing apparatus, creative apparatus, horizontal ladders, horizontal bars, and separate primary area with equipment were selected as being essential. Table 2 shows the frequency of responses and the individual item tabulated as expressed by the national jury.

The greatest emphasis in this area seems to be directed toward equipment that is used for climbing by younger children. Six items received sufficient essential ratings by the national specialists to be included in the Oregon survey. All selected items provide for the development of the younger student and the upper-arm and shoulder movement. The climbing apparatus

received 78.66 percent essential rating and the separate primary area with equipment was second with a 74.17 percent essential total.

Table 2. Frequency Distribution of Outdoor Equipment Items to be Installed at an Elementary School as Rated by 89 Physical Education Specialists.

Outdoor Equipment Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
*1. Balance Beams	54	60.68	20	22.47	8	8.98	6	6.75	1	1.12	0	0
*2. Climbing apparatus - 9' or under	70	78.66	12	13.48	7	7.86	0	0	0	0	0	0
3. Climbing poles	39	43.84	29	32.58	16	17.96	4	4.49	1	1.12	0	0
*4. Creative Apparatus	45	50.58	25	28.09	16	17.97	1	1.12	0	0	2	2.24
*5. Horizontal Ladders	50	56.19	26	29.21	10	11.24	1	1.12	1	1.12	1	1.12
*6. Horizontal Bars	45	50.58	25	28.09	16	17.96	0	0	2	2.25	1	1.12
7. Merry-go-round	2	2.28	6	6.76	16	17.96	19	21.35	42	47.17	4	4.48
8. Obstacle Course	23	25.84	39	43.81	25	28.09	2	2.26	0	0	0	0
9. Parallel Bars	25	28.09	30	33.75	18	20.22	10	11.22	5	5.60	1	1.12
*10. Separate primary area with equipment	66	74.17	14	15.73	8	8.98	0	0	1	1.12	0	0
11. Separate primary equip- ment without sepa- rate area	17	19.12	14	15.73	20	22.48	10	11.22	20	22.47	8	8.98
12. Rings	16	17.96	21	23.59	23	25.84	14	15.77	11	12.36	4	4.48
13. Slides	7	7.86	16	17.98	20	22.48	20	22.47	26	29.21	0	0
14. Swings	11	12.38	13	14.60	21	23.59	20	22.47	24	26.96	0	0
15. Teeter-Totters	3	3.36	9	10.11	20	22.47	19	21.34	31	34.83	7	7.86

*Indicates items to be used in the Oregon survey.

B. Surfacing Material

The only item to be rated essential by the national jury from the eight types of material suggested was the interlocking rubber pads, with a 52.84 percent vote. The next most acceptable material under apparatus is synthetic turf. These results appear in Table 3.

Table 3. Frequency Distribution of Surfacing Material to be Used Under Outdoor Equipment at an Elementary School as Rated by 89 Physical Education Specialists.

Material Under Equipment Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
1. Asphalt	10	11.25	8	8.98	19	21.35	9	10.14	39	43.81	4	4.48
2. Concrete	1	1.12	1	1.12	13	14.63	8	8.98	59	66.29	7	7.86
3. Soil (without grass)	4	4.49	7	7.87	28	31.47	11	12.36	27	30.33	12	13.48
4. Sand	9	10.14	16	17.95	30	33.73	13	14.60	13	14.60	8	8.98
5. Ground wood product, i. e., sawdust or shavings	12	13.48	17	19.12	26	29.21	12	13.48	14	15.73	8	8.98
*6. Interlocking rubber pads	47	52.84	19	21.36	16	17.96	1	1.12	2	2.24	4	4.48
7. Rubber pellets mixed with asphalt	6	6.72	24	26.97	23	25.85	11	12.37	15	16.87	10	11.22
8. Synthetic turf	30	33.73	19	21.34	11	12.36	7	7.86	13	14.60	9	10.11

* Indicates items to be used in the Oregon survey.

Part III Outdoor All-Weather Courts and Court Surface Areas

A. Outdoor All-Weather Courts

A portion of the play space on the schoolgrounds should be surfaced so that a ball can be bounced, lines can be painted, and game areas established. Climatic conditions and types of programs will probably have the greatest effect upon court selection. Of the 13 items listed in this area only three items were considered essential. Low organization game areas, tetherball areas, and volleyball court areas were rated essential by the jury.

The parking space to be used for outdoor courts was included in the study because it is recommended for use in some areas of the country. This item was rejected by the

national jury. Table 4 shows the ratings in this area. The majority of ratings on items fell in the not needed, seldom important, and some importance categories.

Table 4. Frequency Distribution of Outdoor All-weather Courts to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Outdoor All- Weather Courts Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
1. Badminton Courts	9	10.11	14	15.75	38	42.73	16	17.95	10	11.22	2	2.24
2. Basketball Court - one 50 x 100	33	37.23	17	19.06	21	23.54	3	3.35	7	7.85	8	8.97
3. Basketball Court - two 100 x 100	27	30.35	20	22.48	17	19.10	5	5.60	11	12.36	9	10.11
4. Basketball Courts - three 150 x 100	13	14.60	14	15.73	23	25.86	13	14.60	18	20.23	8	8.98
5. Basketball Courts - four 200 x 100	10	11.23	9	10.11	18	20.24	16	17.96	25	28.10	11	12.36
*6. Low organization game areas (circles, lines & other markings)	76	85.42	7	7.86	4	4.48	0	0	0	0	2	2.24
7. Handball (single wall, and rebound wall)	30	33.74	21	23.59	23	25.85	4	4.48	7	7.86	4	4.48
8. Shuffleboard Courts	13	14.60	26	29.24	24	26.98	17	19.10	6	6.72	3	3.36
9. Roller skating area with smooth surface	18	20.23	18	20.23	26	29.21	18	20.23	5	5.60	4	4.48
10. Tennis Courts	20	22.48	15	16.86	35	38.09	15	16.86	9	10.11	5	5.60
*11. Tetherball Areas	49	55.04	26	29.21	9	10.11	2	2.24	2	2.24	1	1.12
*12. Volleyball Courts	45	50.59	25	28.10	11	12.36	6	6.72	1	1.12	1	1.12
13. Parking on Courts	4	4.48	2	2.24	13	14.61	6	6.72	57	64.09	7	7.86

*Indicates items to be used in the Oregon survey.

B. Court Surface Areas

Court surface material that is cheapest to provide and still acceptable for game use has been the type generally installed at most school sites. The surface material selected for the court areas by the national jury was asphalt (blacktop). While synthetic surface material did receive some attention, it was not rated

essential. Table 5 shows the selection of these materials as they were rated by the national jury.

Table 5. Frequency Distribution of Outdoor Court Surface Material Items to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Court Surface Material Items	Most <u>Essential</u>		Usually <u>Important</u>		Some <u>Importance</u>		Seldom <u>Important</u>		Not <u>Needed</u>		Un- <u>Marked</u>	
	5	%	4	%	3	%	2	%	1	%	0	%
*1. Asphalt (blacktop)	45	50.58	23	25.84	18	20.22	0	0	1	1.12	2	2.24
2. Concrete	12	13.48	21	23.64	18	20.22	6	6.72	22	24.72	10	11.22
3. Stabilized Soil	9	10.11	7	7.87	21	23.59	15	16.86	29	32.59	8	8.98
4. Synthetic	41	46.11	16	17.95	12	13.49	3	3.36	12	13.49	5	5.60

*Indicates items to be used in the Oregon survey.

Part IV Outdoor Field Area

Of the 18 items included in this area only two items were rated essential by a majority of the national jury. One football-soccer field space (160' x 360') and the permanent softball backstop were the two items selected. While the high jump area and the long jump area received consideration, they did not receive an essential rating by a majority. Table 6 shows the ratings of the national jury (see page 52).

Part V Dressing-Shower-Locker Area

The development of boys' and girls' participation in community sports has had as much to do with the need for dressing, shower and locker facilities as has the development of the school physical education program. The combination of these factors and greater emphasis upon physical development for everyone is providing the impetus

Table 6. Frequency Distribution of Outdoor Field Areas to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Outdoor Field Area Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
* 1. One football-soccer field space 160' x 360'	45	50.59	9	10.11	11	12.36	3	3.36	8	8.98	13	14.60
2. Two football-soccer field spaces 320' x 360'	25	28.11	22	24.73	15	16.86	4	4.48	13	14.60	10	11.22
3. Three football-soccer field spaces 480' x 360'	16	17.96	12	13.49	18	20.22	9	10.11	23	25.86	11	12.36
4. One softball diamond 150' x 150'	34	38.23	12	13.48	14	15.73	7	7.86	10	11.22	12	13.48
5. Two softball diamonds 300' x 150'	36	40.47	18	20.22	14	15.73	3	3.36	9	10.11	9	10.11
6. Three softball diamonds 450' x 300'	21	23.59	14	15.73	23	25.86	9	10.11	13	14.60	9	10.11
7. Four softball diamonds 600' x 300'	15	16.85	7	7.86	19	21.36	12	13.48	25	28.09	11	12.36
* 8. Permanent softball backstops	62	69.71	8	8.98	7	7.87	3	3.36	5	5.60	4	4.48
9. One portable softball backstop	25	28.09	15	16.85	20	22.49	8	8.98	14	15.73	7	7.86
10. 220 yard permanent track	24	26.98	21	23.61	20	22.49	8	8.98	10	11.22	6	6.72
11. Field space for 220 yard oval track	31	34.87	24	26.96	15	16.85	4	4.48	7	7.86	8	8.98
12. 440 yard permanent track	12	13.48	11	12.36	28	31.48	7	7.86	24	26.96	7	7.86
13. Field space for 440 yard oval track	25	28.11	20	22.49	15	16.87	4	4.48	16	17.94	9	10.11
14. Discus area	3	3.36	2	2.24	12	13.48	14	15.73	47	52.83	11	12.36
15. High jump area	43	48.36	18	20.22	18	20.22	4	4.48	5	5.60	1	1.12
16. Long jump pit	43	48.36	20	22.47	15	16.85	4	4.48	4	4.48	3	3.36
17. Pole vault area	6	6.72	5	5.60	18	20.24	15	16.85	39	43.87	6	6.72
18. Shot put area	10	11.22	7	7.86	16	17.97	13	14.60	37	41.63	6	6.72

* Indicates items to be used in the Oregon survey.

for communities to support additional costs to provide dressing, shower and locker areas.

Recommended as essential in this area were a dressing room for both boys and girls, lockers, toilet facilities in the dressing room, instructors offices, toilet facility in instructors office, separate shower rooms for both boys and girls, shower head at child height, and separate instructors' showers. Table 7 shows the tabulation of the items by the national jury.

Table 7. Frequency Distribution of the Dressing-shower-Locker Area Items to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Dressing-Shower-Locker Area Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
* 1. Separate dressing rooms for both boys and girls	71	79.82	5	5.60	4	4.48	4	4.48	4	4.48	1	1.12
2. Baskets for gym clothing	40	44.98	13	14.60	15	16.85	7	7.86	9	10.11	5	5.60
3. Clothes hooks with branches	34	38.23	13	14.60	17	19.10	8	8.98	11	12.36	6	6.72
* 4. Lockers	49	55.14	16	17.94	10	11.22	6	6.72	7	7.86	1	1.12
* 5. Toilet facilities in dressing room	67	75.32	8	8.98	3	3.36	1	1.12	7	7.86	3	3.36
6. Toilet facilities sepa- rated from dressing room	41	46.10	13	14.60	18	20.22	4	4.48	9	10.11	4	4.48
7. Towel storage and checkout room	42	47.22	18	20.22	12	13.48	7	7.86	7	7.86	3	3.36
8. Drying area for use after shower	43	48.33	20	22.48	11	12.36	4	4.48	8	8.98	3	3.36
* 9. Instructors' offices	66	74.19	13	14.61	4	4.48	4	4.48	2	2.24	0	0
*10. Toilet facility in instructors' office	48	53.96	17	19.10	12	13.48	2	2.24	7	7.86	3	3.36
*11. Separate shower rooms for both boys & girls	73	82.08	4	4.48	4	4.48	2	2.24	5	5.60	1	1.12
*12. Shower head at child height	51	57.37	16	17.94	9	10.11	3	3.36	7	7.86	3	3.36
13. Shower head at adult height	21	23.61	14	15.73	18	20.23	7	7.86	21	23.59	8	8.98
*14. Separate instructor's showers	49	55.09	12	13.48	15	16.85	5	5.60	7	7.86	1	1.12

*Indicates items to be used in the Oregon survey.

Part IV Indoor Instruction Area, Courts and Equipment

A. Indoor Instruction Areas

Of the 19 items included in the indoor instruction area, only six items were selected as essential. These selected items placed in an elementary school building will provide a separate gymnasium area, gymnasium divider to locate two teaching stations, acoustical treatment in gymnasium, padded walls behind basketball backboards, gymnasium size 70' x 100' and gymnasium ceiling height 22'. The tabulation of items in this area are shown in Table 8 (see page 55).

B. Indoor Court Areas

The court areas considered as being essential for the gymnasium were basketball courts, volleyball courts, game circles and lines, and tumbling area. Table 9 shows the ratings received on the 11 items considered in the national survey. The dance area and the adaptive area secured rather high ratings but not sufficient to be included in the Oregon survey (see page 59).

Table 8. Frequency Distribution of the Indoor Instruction Area Items to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Indoor Instruction Area Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
Construction Features												
*1. Separate gymnasium area	76	85.44	6	6.72	4	4.48	0	0	0	0	3	3.36
2. Gymnasium-auditor- ium combined	6	6.72	14	15.76	24	26.98	8	8.98	27	30.34	10	11.22
3. Gymnasium-cafeteria combined	4	4.48	3	3.36	17	19.10	10	11.22	45	50.62	10	11.22
*4. Gymnasium divider to locate two teaching stations	46	51.74	18	20.22	13	14.60	4	4.48	5	5.60	3	3.36
*5. Acoustical treatment in gymnasium	67	75.31	14	15.73	6	6.72	0	0	1	1.12	1	1.12
6. Portable stage for gymnasium	11	12.36	12	13.48	29	32.61	12	13.48	20	22.47	5	5.60
*7. Padded walls behind basketball back- boards	63	70.84	13	14.60	6	6.72	2	2.24	1	1.12	4	4.48
8. Separate gymnasium space	38	42.74	18	20.22	11	12.36	7	7.86	10	11.22	5	5.60
9. Permanent stage con- nected to gymnasium	5	5.60	8	8.98	15	16.85	13	14.60	39	43.86	9	10.11
10. Bleacher seating pro- vided	16	17.96	8	8.98	21	23.59	18	20.24	24	26.99	2	2.24
11. Public address system provided	42	47.24	23	25.84	12	13.48	6	6.72	3	3.36	3	3.36
12. Gymnasium size 40' x 60'	10	11.22	6	6.72	14	15.75	7	7.87	31	34.86	21	23.59
13. Gymnasium size 50' x 75'	17	19.10	10	11.22	11	12.36	13	14.61	20	22.49	18	20.22
14. Gymnasium size 54' x 90'	16	17.96	11	12.36	17	19.10	6	6.72	21	23.62	18	20.24
15. Gymnasium size 62' x 100'	20	22.48	18	20.22	10	11.22	7	7.86	19	21.36	15	16.86
*16. Gymnasium size 70' x 100'	45	50.60	9	10.11	9	10.11	5	5.60	11	12.36	10	11.22
*17. Gymnasium ceiling height 22'	45	50.60	17	19.12	10	11.22	3	3.36	8	8.98	6	6.72
18. Gymnasium ceiling height 20'	25	28.09	30	33.72	9	10.11	2	2.24	11	12.36	12	13.48
19. Gymnasium ceiling height 18'	16	17.98	10	11.22	23	25.89	6	6.72	18	20.25	16	17.94

* Indicates items to be used in the Oregon survey.

Table 9. Frequency Distribution of the Indoor Court Area Items to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Indoor Court Area Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
<u>Court Areas</u>												
*1. Basketball area	71	79.79	11	12.37	6	6.72	0	0	0	0	1	1.12
*2. Volleyball area	67	75.31	15	16.85	6	6.72	0	0	0	0	1	1.12
3. Badminton area	23	25.89	16	17.94	35	39.34	9	10.11	2	2.24	4	4.48
*4. Game circles & lines area	70	78.68	11	12.36	6	6.72	0	0	0	0	2	2.24
5. Shuffleboard area	15	16.86	11	12.36	39	43.84	11	12.36	8	8.98	5	5.60
6. Dance area	38	42.76	18	20.22	19	21.34	4	4.48	6	6.72	4	4.48
7. Adaptive area	37	41.61	24	26.96	20	22.47	5	5.60	0	0	3	3.36
8. Weight room area	6	6.72	11	12.36	20	22.48	24	26.98	24	26.98	4	4.48
9. Gymnastics area	41	46.09	23	25.84	11	12.36	3	3.36	9	10.11	2	2.24
10. Wrestling area	10	11.22	19	21.34	29	32.63	12	13.48	15	16.85	4	4.48
*11. Tumbling area	49	55.11	21	23.59	8	8.98	2	2.24	4	4.48	5	5.60

*Indicates items to be used in the Oregon survey.

C. Indoor Equipment

Of the 28 items included in this area there were nine that were rated essential by a majority of the national jury. Recommended as essential were a balance beam, basketball backboards, adjustable basketball hoop, climbing ropes, horizontal bar, horizontal ladder, tumbling mat, vaulting box, and net standards (multiple use). The ratings of all pieces of equipment in this area are included in Table 10 (see page 57).

Table 10. Frequency Distribution of the Indoor Equipment Items to be Provided at an Elementary School as Rated by 89 Physical Education Specialists.

Indoor Equipment Items	Most Essential		Usually Important		Some Importance		Seldom Important		Not Needed		Un- Marked	
	5	%	4	%	3	%	2	%	1	%	0	%
Indoor Equipment												
1. Balance Beam (high)	33	37.20	22	24.68	22	24.68	4	4.48	6	6.72	2	2.24
*2. Balance Beam (low)	74	83.16	13	14.60	1	1.12	1	1.12	0	0	0	0
*3. Basketball Backboards	76	85.42	7	7.86	2	2.24	2	2.24	0	0	2	2.24
4. Basketball hoops 8' high	39	43.84	12	13.48	11	12.36	5	5.60	11	12.36	11	12.36
5. Basketball hoops 9' high	25	28.13	19	21.34	13	14.60	5	5.60	13	14.60	14	15.73
6. Basketball hoops 10' high	42	47.19	9	10.11	11	12.36	1	1.12	15	16.86	11	12.36
*7. Adjustable basketball hoop	51	57.34	9	10.11	13	14.60	4	4.48	9	10.11	3	3.36
8. Benches	32	35.98	15	16.85	26	29.23	5	5.60	7	7.86	4	4.48
9. Bouncing planks	25	28.09	14	15.73	30	33.74	7	7.86	6	6.72	7	7.86
10. Cargo net	33	37.21	20	22.42	24	26.93	2	2.24	4	4.48	6	6.72
11. Climbing poles	42	47.23	20	22.47	18	20.22	3	3.36	3	3.36	3	3.36
*12. Climbing ropes	64	71.97	16	17.94	7	7.86	1	1.12	0	0	1	1.12
13. Climbing frame (portable and adjustable)	38	42.75	20	22.47	18	20.22	3	3.36	4	4.48	6	6.72
*14. Horizontal Bar	53	59.58	17	19.10	11	12.36	5	5.60	0	0	3	3.36
*15. Horizontal Ladder	48	53.96	20	22.47	15	16.85	3	3.36	1	1.12	2	2.24
16. Parallel Bars	29	32.62	26	29.21	20	22.47	8	8.98	3	3.36	3	3.36
17. Peg Boards	39	43.85	17	19.10	26	29.21	4	4.48	3	3.36	0	0
18. Stall Bars	25	28.09	18	20.22	28	31.49	7	7.86	8	8.98	3	3.36
19. Still Rings	17	19.10	16	17.94	34	38.25	9	10.11	11	12.36	2	2.24
20. Traveling Rings	14	15.73	17	19.10	34	38.22	9	10.11	11	12.36	4	4.48
21. Trampoline	8	8.98	21	23.59	29	32.58	10	11.22	10	11.22	1	1.12
*22. Tumbling mat	84	94.40	2	2.24	2	2.24	0	0	0	0	1	1.12
23. Wrestling mat	16	17.94	17	19.10	28	31.51	11	12.36	14	15.73	3	3.36
*24. Vaulting box	51	57.33	21	23.59	13	14.60	0	0	4	4.48	0	0
25. Vaulting buck	25	28.09	32	35.98	20	22.47	2	2.24	7	7.86	3	3.36
*26. Net standards (multiple use)	80	89.92	2	2.24	3	3.36	0	0	0	0	4	4.48
27. Spring board	20	22.47	25	28.09	23	25.88	10	11.22	8	8.98	3	3.36
28. Weight training equipment	8	8.98	11	12.36	28	31.49	13	14.60	26	29.21	3	3.36

* Indicates items to be used in the Oregon survey.

In the national survey 137 items were evaluated and ranked by 89 elementary school physical education specialists. Of the 137 items listed 41 items were selected as essential for a quality elementary school physical education program. These items are listed in Table 11 and will be used as the items for the Oregon survey.

Table 11. Items from the National Survey Which Received a Majority Vote in the Essential Category.

Items
<u>Part I Community School Area</u>
Accessible toilet facilities
<u>Part II Outdoor Equipment and Surfacing Material</u>
<u>A. Equipment</u>
Balance beam
Climbing apparatus - 9' or under
Creative apparatus
Horizontal bars
Horizontal ladder
Separate primary area with equipment
<u>B. Surfacing Material</u>
Interlocking rubber pads
<u>Part III Outdoor All-Weather Courts and Court Surface Area</u>
<u>A. Outdoor All-Weather Courts</u>
Low organization game areas (circles, lines, and other markings)
Tetherball areas
Volleyball courts
<u>B. Court Surface Area</u>
Asphalt (blacktop)

Part IV Outdoor Field Area

One football-soccer field space 160' x 360'
Permanent softball backstops

Part V. Dressing-Shower-Locker Area

Separate dressing rooms for both boys and girls
Lockers
Toilet facilities in dressing room
Instructors' offices
Toilet facility in instructors' office
Separate shower rooms for both boys and girls
Shower head at child height
Separate instructors showers

Part VI Indoor Instruction Areas, Courts, and Equipment

A. Indoor Instruction Areas

Separate gymnasium area
Gymnasium divider to locate two teaching stations
Acoustical treatment in gymnasium
Padded walls behind basketball backboards
Gymnasium size 70' x 100'
Gymnasium ceiling height 22'

B. Indoor Court Areas

Basketball area
Volleyball area
Game circles and lines area
Tumbling area

C. Indoor Equipment

Balance beam (low)
Basketball backboards
Adjustable basketball hoop
Climbing ropes
Horizontal bar
Horizontal ladder
Tumbling mat
Vaulting box
Net standards (multiple use)

Oregon Survey

The purpose of the Oregon survey is to determine which items are being provided or are not being provided in the Oregon elementary schools, that are considered to be essential by a national jury of experts in elementary physical education.

The form to be used in the Oregon survey was developed by extracting all items from the national survey which received a majority rating in the essential category. These items are listed in Table 11 as they were selected by the national jury. The form was mailed to principals of schools in Oregon with an ADM of 350 to 600 population which matches the size of schools used in the national survey (see Appendix L). Responses on the survey were facilitated by providing for yes () or no () answers on each of the 41 items. Of the 348 Oregon schools selected in this study, 329 (94.5%) schools responded. Since the replies to the Oregon survey were a yes-no response, the tabulation indicates whether the items are being provided or are not being provided in the school.

The results are tabulated in Table 12. Each item is marked with number provided or the number not provided, together with the percentage listed by each item of respondents who checked the item.

Table 12. Frequency Distribution of Facilities and Equipment That Are Provided or Not Provided in the Oregon Elementary Schools as Derived from the Oregon Survey.

Items	Schools Providing		Schools Not Providing	
	Number	Percentage	Number	Percentage
<u>PART I Community School Area</u>				
1. Accessible toilet facilities	79	24.01	250	75.99
<u>PART II Outdoor Equipment</u>				
2. Balance Beams	57	13.37	272	86.63
3. Climbing Apparatus - 9' or under	310	94.23	19	5.77
4. Creative Apparatus	111	33.37	218	66.63
5. Horizontal Ladders	264	80.25	65	19.75
6. Horizontal Bars	248	75.69	81	24.31
7. Separate primary area with equipment	141	42.85	188	57.15
<u>Material Under Apparatus</u>				
8. Interlocking rubber pads	16	4.32	313	95.68
<u>PART III Outdoor All Weather Courts</u>				
9. Low organization game areas (circles, lines, and other markings)	295	89.67	34	10.33
10. Tetherball Areas	313	95.68	16	4.32
11. Volleyball Courts	140	42.83	189	57.17
12. Asphalt (blacktop) surface for courts	289	87.54	40	12.46
<u>PART IV Outdoor Field Areas</u>				
13. One Football-Soccer field space 160' x 360'	225	68.39	104	31.61
14. Permanent Softball Backstops	301	91.49	28	8.51
<u>PART V Dressing Shower Locker Areas</u>				
15. Separate dressing rooms for both boys and girls	206	62.62	123	37.38
16. Lockers	168	51.07	161	48.93
17. Toilet facilities in dressing room	218	66.27	111	33.73
18. Instructor office in the dressing area	130	39.51	199	60.49
19. Toilet facilities in instructor's office	71	21.58	258	78.42
20. Separate shower rooms for both boys and girls	165	50.02	164	49.98
21. Shower head at child's height	119	36.13	210	63.37
22. Separate instructor's shower	23	6.99	306	93.01
<u>PART VI Indoor Instruction Areas</u>				
23. Separate gymnasium area	258	78.42	71	21.58
24. Gymnasium divider to locate two teaching stations	16	4.32	313	95.68
25. Acoustical treatment in gymnasium	164	49.98	165	50.02
26. Padded walls behind basketball backboards	179	54.41	150	45.59
27. Gymnasium size 70' x 100'	108	32.82	221	67.18
28. Gymnasium ceiling height 22'	245	74.47	84	25.53

Table 12 (continued)

Items	<u>Schools Providing</u>		<u>Schools Not Providing</u>	
	Number	Percentage	Number	Percentage
<u>Indoor Court Areas</u>				
29. Basketball courts	291	88.45	38	11.55
30. Volleyball courts	300	91.19	29	8.81
31. Game circles and game lines	250	75.99	79	24.01
32. Tumbling area	214	65.05	115	34.95
<u>Permanent Indoor Equipment</u>				
33. Balance Beam (low)	219	66.60	110	33.40
34. Basketball Backboards	294	89.37	35	10.63
35. Adjustable Basketball Backboards and Hoops	35	10.63	294	89.37
36. Climbing Ropes	278	84.50	51	15.50
37. Horizontal Bar	212	64.44	117	35.56
38. Horizontal Ladder	122	37.08	207	62.92
39. Tumbling Mats	305	92.71	24	7.29
40. Vaulting Box	79	24.01	250	75.99
41. Net Standards (multiple use)	231	70.22	98	29.78

In the Oregon survey there were 25 items out of the 41 listed that were marked by the majority of elementary principals as being provided in the Oregon elementary schools. The majority was determined by using all scores which totaled greater than half of the number of respondents.

The minimum standards for elementary schools in Oregon established by the Oregon State Board of Education list the following facility and equipment items for elementary school physical education:

A. Outdoor facilities and equipment

- | | |
|----------------------------------|--------------------------|
| 1. Tetherball areas | 5. Horizontal ladders |
| 2. Climbing apparatus | 6. Horizontal bars |
| 3. Low organizational game areas | 7. Football-soccer field |
| 4. Asphalt surface area | 8. Softball backstop |

B. Indoor facilities and equipment

- | | |
|-------------------------------------|-----------------------------------------------|
| 1. Tumbling mats | 9. Dressing-shower and toilet facilities |
| 2. Volleyball and basketball courts | 10. Tumbling area |
| 3. Basketball backboards | 11. Horizontal ladder |
| 4. Gymnasium | 12. Horizontal bar |
| 5. Game circles and lines | 13. Padded walls behind basketball backboards |
| 6. Ceiling height 20' | |
| 7. Net standards | 14. Lockers |
| 8. Climbing rope | |

A comparison of the items listed as minimum by the Oregon State Board of Education and the items considered as essential by the national jury is made in Table 13. The items listed as minimum standards in Oregon are marked with an asterisk (*).

The items from the Oregon study have been placed in rank order in Table 13 as they are now being provided in the Oregon elementary schools. The double line in the table indicates the dividing point of those items that scored below or above the 50 percent rating.

Table 13. Rank Order of Items Now Being Provided and Not Being Provided in Oregon Elementary Schools.

Items	Schools Providing		Schools Not Providing	
	Number	Percentage	Number	Percentage
* 1. Tetherball Areas	313	95.68	16	4.32
* 2. Climbing Apparatus - 9' or under	310	94.23	19	5.77
* 3. Tumbling Mats	305	92.71	24	7.29
4. Permanent Softball Backstops	301	91.49	28	8.51
* 5. Volleyball Courts (indoors)	300	91.19	29	8.81
* 6. Low organization game areas (circles, lines and other markings) (outdoors)	295	89.67	34	10.33
* 7. Basketball Backboards (indoors)	294	89.37	35	10.63
* 8. Basketball Courts (indoors)	291	88.45	38	11.55
* 9. Asphalt (blacktop) surface for courts	289	87.54	40	12.46
*10. Climbing Ropes	278	84.50	51	15.50
*11. Horizontal Ladders (outdoors)	264	80.25	65	19.75
12. Separate gymnasium area	258	78.42	71	21.58
*13. Game circles and game lines (indoors)	250	75.99	79	24.01
*14. Horizontal Bars (outdoors)	248	75.69	81	24.31
15. Gymnasium's ceiling height 22'	245	74.47	84	25.53
*16. Net Standards (multiple use)	231	70.22	98	29.78
*17. One Football-Soccer field space 160' x 360'	225	68.39	104	31.61
18. Balance Beam (low) (indoors)	219	66.60	110	33.40
*19. Toilet facilities in dressing room	218	66.27	111	33.73
*20. Tumbling area	214	65.05	115	34.95
*21. Horizontal Bar (indoors)	212	64.44	117	35.56
*22. Separate dressing rooms for both boys and girls	206	62.62	123	37.38
*23. Padded walls behind basketball backboards	179	54.41	150	45.59
*24. Lockers	168	51.07	161	48.93
*25. Separate shower rooms for both boys and girls	165	50.02	164	49.98
26. Acoustical treatment in gymnasium	164	49.98	165	50.02
27. Separate primary area with equipment	141	42.85	188	57.15
28. Volleyball Courts (outdoors)	140	42.83	189	57.17
29. Instructor office in the dressing area	130	39.51	199	60.49
*30. Horizontal Ladder (indoors)	122	37.08	207	62.92
31. Shower head at child's height	119	36.13	210	63.87
32. Creative Apparatus (outdoors)	111	33.37	218	66.63
33. Gymnasium size 70' x 100'	108	32.82	221	67.18
34. Accessible toilet facilities (from outdoors)	79	24.01	250	75.99
35. Vaulting Box	79	24.01	250	75.99
36. Toilet facilities in instructor's office	71	21.58	258	78.42
37. Balance Beams (outdoors)	57	13.37	272	86.63
38. Adjustable Basketball Backboards and Hoops	35	10.63	294	89.37
39. Separate instructor's shower	23	6.99	306	93.01
40. Gymnasium divider to locate two teaching stations	16	4.32	313	95.68
41. Interlocking rubber pads (under apparatus)	16	4.32	313	95.68

*Minimum standards in Oregon

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This study compares the existing Oregon elementary school physical education facilities with those facilities perceived by a national jury to be essential for a quality physical education program. The study presents support or rejection of the inclusion of facilities and equipment now being used or not being used in the elementary schools of Oregon.

State directors of physical education submitted names of persons in their state whom they thought to be experts in the field of elementary school physical education facilities and equipment. The 125 specialists named by the state directors were asked to participate in the study and 110 specialists consented to act as a national jury.

The national survey was printed and mailed to the 110 persons who had consented to assist. Completed survey forms were returned by 89 (81 percent) of the 110 jury members. Of the 137 items included in the survey, 41 items were considered essential by a majority of the jury. These 41 selected items were included on the Oregon survey form. The Oregon survey form was mailed to 348 elementary school principals requesting that a "yes" or "no" answer on the form be provided if the items listed were now being provided in their school. Of the 329 Oregon survey forms returned 25 of the 41 items included

in the survey were reported as now being provided in a majority of elementary schools.

Conclusions from National Study

The conclusions derived from the national study are compiled using the same categories that were presented to the national jury. Differences of opinion and knowledge are apparent when studying the answers submitted by the persons returning the survey forms. Geographic locations and school size with which the jury members have been or are presently associated were balanced by the national selection of the members.

Community School Area

1. From this study, the majority of specialists comprising the national jury did not endorse the elementary school facility for use as a community-park-school.
2. The selection by the national jury of "accessible toilet facilities" indicates the importance placed on the item that is used and needed in the case of activities operating during the day, after school, or on weekends when the facilities in the other parts of the building are not normally accessible.

Outdoor Equipment and Surfacing Material

A. Equipment

1. The outdoor equipment selected by the national jury was for the purpose of climbing, hanging, and balance activities which contribute toward the physical development of the individual.
2. Outdoor equipment such as swings, slides, teeter-totters and merry-go-rounds were not recommended for elementary physical education purposes.
3. Outdoor equipment for park and recreational purposes was not selected by the national jury.

B. Surfacing Material

1. The material to be included under the playground equipment is to be soft in composition and preferably made of interlocking rubber pads.
2. Material such as asphalt or concrete are not recommended for surfacing material under the outdoor equipment.

Outdoor All-Weather Courts and Court Surface Areas

A. Outdoor All-Weather Courts

1. Courts for low organization games and usable for all age groups were considered essential to a quality elementary school physical education program.

2. Courts designed to fit specific sports and sports rules such as basketball, badminton, tennis, and shuffleboard were not considered essential to a quality elementary school physical education program.

B. Court Surface Area

1. The material selected by the national jury for outdoor court surface area was asphalt composition. This selection agrees with the physical education authorities and their recommendations of a smooth surface with the ability to retain painted court or game lines.

Outdoor Field Areas

1. The area standards for the amount of outdoor field space selected by the national jury fall short of the space standards recommended as essential by physical education authorities.
2. No attempt was made in this survey to determine if the respective elementary school physical education specialists were from the inner-city and were not accustomed to space availability.

Dressing-Shower-Locker Area

1. Dressing rooms, showers, and lockers were considered essential for a quality elementary physical education program by the national jury.

2. The shower heads for the boys and girls shower room should be installed at child's height instead of the height appropriate for adults.
3. The exclusion of the towel issue room, drying area, and baskets leaves the area with a minimum amount of space rather than an adequate one.
4. The instructor should have an office with toilet and shower facilities separate from the student facility.

Indoor Instruction Area, Courts and Equipment

A. Indoor Instruction Areas

1. The gymnasium should be a separate facility and not combined with the cafeteria or used as an auditorium.
2. The national jury recommended that the gymnasium be acoustically treated and that a dividing partition be used to locate two teaching stations.
3. The gymnasium should be 70 feet wide, 100 feet long and have a ceiling height of 22 feet.
4. There should be padded walls behind the basketball backboards.
5. It is not recommended by the national jury that bleacher seating or stage provisions be included in the gymnasium complex.

B. Indoor Court Areas

1. The court areas recommended by the national jury are to be basketball, volleyball, and game circles and lines.
2. The national jury recommends that there be space provided in the gymnasium for tumbling activities.
3. The national jury does not recommend additional area be provided for gymnastics, dance, wrestling, badminton, shuffleboard, weight training, or adaptive instruction.

C. Indoor Equipment

1. The inclusion of the following indoor equipment: balance beam, basketball backboards, adjustable basketball hoops, climbing ropes, horizontal bar, horizontal ladder, tumbling mats, vaulting box, and net standards are recommended by the national jury.
2. From the selection of indoor equipment items the national jury favored a traditional program orientation rather than a more innovative type of instructional program. Equipment items not selected by the national jury, but usually considered necessary for the newer types of programs, are the climbing frame, benches, bouncing planks, and cargo nets.
3. Equipment considered necessary or useful for community and recreational purposes were not recommended by the national jury.

Conclusions from Oregon Study

Conclusions from the Oregon study are derived from the results of the Oregon survey and what equipment and facilities are available in the Oregon elementary schools compared to what the national jury considered to be essential.

1. The majority of school facilities in Oregon are not developed to involve a community school concept.
2. Of the 41 items selected by the national jury as being essential for a quality elementary school physical education program, there were 22 items included in the minimum standards for Oregon. Out of these 22 items, 21 items are now being provided in the majority of elementary schools responding to the Oregon survey.
3. Oregon places a greater emphasis on indoor facilities and equipment than it does on outdoor facilities and equipment. Of the 41 items perceived in the national survey to be essential for a quality program, 14 items involve outdoor areas and 17 items appear in indoor areas. A majority of Oregon elementary schools now provide 8 of the 14 outdoor items (57%) and 17 of the 27 indoor items (63%) listed as essential by the national jury.
4. It is apparent many schools in Oregon are not meeting the minimum standards for physical education facilities and equipment established by the Oregon State Board of Education.

5. The elementary school principals in Oregon need to be made aware of the minimum standards for their physical education facilities and equipment.
6. The State Board of Education needs to develop an up-to-date standard booklet for physical education facilities and equipment and make it available to all school administrators in the State of Oregon.

Recommendations and Implications

The investigation summarized in the previous pages bring forward many implications for concern. It is the writer's opinion that this study has been useful in contributing information relative to the state of Oregon and the physical education facilities and equipment needs of the elementary schools in this state. It is also recommended that additional research be done on the national level that will relate not only to the elementary school facilities and equipment but also to the secondary school needs.

After pondering upon the procedures utilized in this investigation several questions tend to keep reappearing. Perhaps answers to the following questions will open new vistas of research insofar as the physical education facilities and equipment for elementary school is concerned.

1. Would the results have differed if the study had taken into consideration the geographic locations of the evaluators?
2. Would there have been significant differences in the results if

the school district size where the evaluators on the national jury are employed had been predetermined?

3. Should the items used in the national survey have been taken from the existing items in the Oregon elementary schools, instead of the related literature?
4. Is the increased emphasis upon additional facilities such as showers, lockers, and dressing rooms a result of adult groups requesting their use or is it because of more elaborate and sophisticated types of physical education instruction?
5. Were the items included in the survey form explicit enough to provide the evaluator enough variance in his selection? It was particularly noticeable in the outdoor field space where the facilities selected were not appropriate to meet the minimum needs let alone the needs for a quality program.
6. Is there a need for controlled experiments on equipment used for physical education to determine what a specific equipment item does or does not accomplish for students?

In addition to the above points, several other implications emerge for further consideration. The following recommendations merit consideration as a part of this study.

1. Efforts should be made to educate and involve the people of the community into the study and implementation of their school facilities. The leadership of this community organization should

involve the physical education staff as leaders of the physical education-recreation complex to answer the following questions:

- A. Is the school going to be used by the community?
 - B. Will the community use the school grounds as a park and play area?
 - C. Should schools provide "accessible toilet facilities"?
 - D. Will the school playground equipment be used for recreation?
 - E. Should swings, slides, teeter-totters and merry-go-rounds be provided if the school is not a "park" school?
2. The elements of safety and the provisions for proper use of the playground equipment must be taken seriously. A good instructional program should teach children the proper use of playground equipment. It is also recommended that all schools look for and install safe, soft material to be used under the playground equipment.
 3. Appropriate all-weather courts should be made available in all elementary school complexes. The size of the courts should be determined by the written specifications of the state.
 4. All elementary schools should provide sufficient space for outdoor field areas. In the cities where schools are crowded, it should be the responsibility of the community and the state to establish priority of space.
 5. Dressing rooms-showers-and-locker areas should be provided

in all new schools and added to the older schools when possible. Concern should be expressed by the local school administrators to their school boards and communities for inclusion of these items. The use of these facilities should be designed for adult use as well as for physical education use. There should be an instructor's office with shower and toilet facilities in each dressing area.

6. It is recommended that all elementary schools be planned to include a gymnasium separated from the cafeteria area and that the gymnasium size to be at least 70' x 100' for a school enrollment of 350 to 600 students with the following features:
 - A. The gymnasium should have volleyball and basketball courts as well as low organization game lines and circles.
 - B. The gymnasium should contain basketball backboards that are adjustable in height.
 - C. At least one set of volleyball standards and nets are to be supplied for each gymnasium.
 - D. Additional equipment to be supplied for the gymnasium will be tumbling mats, vaulting box, climbing ropes, horizontal ladder, horizontal bar, and balance beam.
7. A greater concern needs to be developed at the state level to insist upon more adequate provisions for physical education facilities and equipment in the elementary schools of Oregon. In addition to enforcing the minimum standards as they have been established by the State Board of Education, the Board should

prescribe up-to-date facilities and equipment necessary for a quality physical education program.

8. The physical education facilities and equipment specified by the national jury as essential for a quality physical education program should be provided for all elementary schools in all states.
9. While the national jury did not rate the community school concept as essential for quality physical education programs, it is recommended that local school boards and community park and recreation departments enter into legal agreements for constructing elementary schools adaptable for community use. The cost required for the adaptation of school facilities for community use should be paid from recreation or park district funds rather than school district funds.
10. An up-to-date guide needs to be developed by the State Board of Education which will facilitate program planning and a better understanding of the facilities and equipment needed for a quality physical education program. The guide should include the diagrams and specifications of all elementary school facilities and equipment.

In conclusion, this study tends to support Dauer (9, p. 32)

who writes:

It is essential that sufficient facilities and adequate equipment and supplies be present so that an effective program can be operated. Standards should be established and adhered to. In setting up a building program, it is important to decide first the type of program desired and then plan the play facilities to meet the needs.

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APPENDICES

APPENDIX A

January 22, 1971

Dr. Margie R. Hanson, Consultant
Elementary Physical Education
American Association for Health,
Physical Education and Recreation
1201 Sixteenth Street, N. W.
Washington, D. C. 20036

Dear Margie:

I want to thank you for submitting individual names to contact regarding elementary physical education facilities. Dr. James Long was most cooperative in suggesting further contacts.

I plan on starting some preliminary work as soon as I can secure sufficient resources. Since I know so many individuals involved in positions similar to mine, I think probably this would be the best place to begin. I am not so sure of addresses and state locations as I am familiar with names and faces, therefore, I am wondering if you could make available to me the names and addresses of the national, city, and county directors. It seems to me, I used to have a booklet containing these members but I can't seem to locate it. I want to write a personal letter to each member I am acquainted with and ask them if they would assist me in collecting data for publishing pertinent information on elementary facilities. I will use their names and make reference to their contribution as it fits the program. Mr. John Amundson, a local architect, is going to assist me in doing the technical work and layouts. He feels that this material would be a real asset to all architects and public schools.

Well, anyway, I plan on taking this approach. I will be unable to begin until I hear from you and know if these addresses are available. I would like to do my contact work before I see these people at the national convention in Detroit. Please assist me in whatever way you can. This will be most appreciated.

Thank you.

Frank Sherman, Director-Consultant
Health, Physical Education
and Athletics

APPENDIX B

LIST OF RECOMMENDED PERSONNEL FROM AAHPER OFFICE

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Mr. Gordon Jensen, Supervisor
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Acting Director, Health
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APPENDIX C

LETTER MAILED TO STATE DIRECTORS

February 13, 1971

Dear _____:

How are things in _____? Time is flying and we will soon be in Detroit for another AAHPER convention. Since our convention in Boston two years ago I have been toying with the idea of working up a paper on physical education facilities for elementary schools. I plan on making a thorough study of each state to see if enough pertinent information can be obtained to make this information useful for all of us working in this field.

In corresponding with Margie Hanson and Ray Ciszek of the AAHPER, they feel the best place to begin is with you. With this in mind, I wonder if you can send me the names of two or three people in your state that would be willing to take part in this venture? I will use their name and system as one of the resources in the material. I would appreciate hearing from you on any suggestions you might have and the names of people whom I might contact.

I am sure you realize the scope of this project and how voluminous the correspondence will be, so please let me know what you think and who you think can be most helpful.

Hope to see you in Detroit. Thanking you for your assistance.

Sincerely,

Frank A. Sherman
525 Mill Street
Springfield, Oregon 97477

APPENDIX D

FOLLOW-UP LETTER TO STATE DIRECTOR

February 13, 1971

Dear _____:

This is a reminder of a letter mailed to you in the latter part of February presenting a plan to study each state and see if enough information could be obtained to develop a paper on recommended elementary school physical education facilities.

In order to accomplish this task I would like to know the names and addresses of two or more people in your state that you would recommend to be contacted for assisting in providing knowledgeable information in this field. Full recognition will be given to all participating individuals.

The response to the first letter has been quite gratifying and the participating states are being most helpful.

Please let me include your state in this study. I know you have a great deal to offer along this line.

Thanking you again for your assistance.

Sincerely,

Frank A. Sherman, Coordinator
Health, Physical Education,
and Athletics
525 Mill Street
Springfield, Oregon 97477

APPENDIX E

LIST OF RECOMMENDED EXPERTS FROM THE STATE DIRECTORS

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Mr. Gary Akers
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 Supervisor of Elem. Phys. Ed.
 No. Little Rock Public Schools
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ALASKA

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 Markham and Izard
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Mr. Gary Barry, Director
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 Colorado Springs Schools
 Colorado Springs, Colorado

D. C.

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MISSOURI (continued)

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Mr. Tom Lux
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Sioux Falls, South Dakota

Mr. Tubby Gunderson
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Sisseton Public Schools
Sisseton, South Dakota

TEXAS

Send to Principal:

Midway Elementary School
Hurst-Eules-Bedford ISD
Hurst, Texas

Snyder Elm. School
Snyder, Texas

Dumas Elem. School
Dumas, Texas

Refugio Elem. School
Refugio, Texas

Highland Elem. School
Plainview, Texas

Barton Hills Elem. School
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Salt Lake Board of Ed.
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Mr. Jim Ennis, Director
 Health, Physical Ed. & Athletics
 Everett Public Schools
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APPENDIX F

LETTER TO RECOMMENDED EXPERTS

Dear _____:

Your name was submitted to me by _____ who is _____ in your state, indicating that you are most knowledgeable in the field of elementary physical education and facility planning. I am planning to conduct a thorough study on elementary school physical education facilities and would like to call upon you to assist. It will be necessary for you to recommend or indicate what you feel are the most essential facilities for conducting a good physical education program in the elementary school.

This study is going to be as complete as is feasibly possible by using individuals such as yourself in providing the information.

All information submitted by you will be studied and recorded. You will be given credit in the publication for assisting in this project.

There will be a lengthy questionnaire that will have to be filled out and will require some of your time to complete and return. This questionnaire will be quite costly to print and will be sent only to individuals who desire to participate. I have enclosed a self-addressed and stamped postcard which will indicate your interest in this endeavor. I hope you will assist me in this study. This is one study that could be of significant value to all of us in future planning.

Please return the enclosed care immediately and hopefully you will consent to assist.

Most Sincerely,

Frank A. Sherman, Coordinator
Health, Physical Education,
and Athletics

APPENDIX G

- () Yes, I will help in this facilities study.
- () No, I cannot help in this facilities study.

Name _____

Address _____

TO:

Frank Sherman, Supervisor
Health & Physical Education
Springfield Public Schools
525 Mill Street
Springfield, Oregon 97477

APPENDIX H

DIVISION OF HEALTH AND PHYSICAL EDUCATION
OREGON STATE UNIVERSITY
CORVALLIS, OREGON

A SURVEY OF
ESSENTIAL ELEMENTARY SCHOOL PHYSICAL EDUCATION
FACILITIES AND PERMANENT EQUIPMENT

CODE NUMBER _____ STATE _____

This survey seeks responses from selected physical education personnel who can assist in determining the facility and permanent equipment items essential to conduct a quality elementary school physical education program for grades one through six.

You have been selected to participate in this study because of your interest and concern in the area of elementary physical education. Please use the enclosed self-addressed envelope to return this questionnaire as soon as possible.

To facilitate the answering of this questionnaire, it is necessary to establish two sets of criteria.

1. The school should be judged as an elementary school for grades 1 through 6 with an enrollment of 350, but not over 600 students.
2. Consider those facilities and permanent equipment as essential for an adequate program and not just the minimum.

..... Essential -- something basic or necessary
..... Minimum -- the least quantity admissible

PART I. COMMUNITY SCHOOL AREA										
	5	4	3	2	1					
What in your judgement realistically should be included with the community school concept. Rate each of the following items on a point basis of one to five with 5 being the most essential, 4 being next, etc.....	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed	5	4	3	2	1
1. Community Park School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Accessible toilet facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Picnic area, benches, tables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Preschool play lot area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Swim pool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Wading pool area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Outdoor ice skating rink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART II. OUTDOOR EQUIPMENT

Rate the following pieces of equipment as you see their importance to the school facilities and equipment.

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
1. Balance Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Climbing apparatus--9' or under	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Climbing Poles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Horizontal Ladders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Horizontal Bars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Merry-go-round	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Obstacle Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Parallel Bars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Primary area separated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Separate primary equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Rings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Slides	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Swings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Teeter-Totters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

MATERIAL UNDER APPARATUS

16. Asphalt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Concrete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Soil (without grass)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Sand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Ground wood product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Interlocking rubber pads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Ribber pellets mixed with asphalt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Synthetic turf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
24. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

PART III. OUTDOOR ALL WEATHER COURTS

The size of the all-weather surface is determined by the courts needed. Rate each of the following as you see they fit on the school ground play area.

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
1. Badminton Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Basketball Courts--one 50 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Basketball Courts--two 100 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Basketball Courts--three 150 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Basketball Courts--four 200 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Games of low organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Handball (single wall)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Shuffleboard Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Skating (roller) (smooth surface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Tennis Court area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Tetherball areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Volleyball Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Parking on courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

COURT SURFACE AREA

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
15. Asphalt (tar base)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Concrete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Synthetic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

PART IV. OUTDOOR FIELD AREAS

Rate the following areas as to importance of space needed. The overlap of track areas, field games, and softball space is to be considered.

1. One football-soccer field space 160' x 360'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Two football-soccer field space 320' x 360'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Three football-soccer field space 480' x 360'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Two softball diamonds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Three softball diamonds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Four softball diamonds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. One permanent softball backstop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Two permanent softball backstops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. One portable softball backstop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Two portable softball backstops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. 220 Yard permanet track	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
12. 220 yard space only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. 440 yard permanent track	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. 440 yard space only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Discus area--one	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. High jump areas--two	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Long jump pits--two	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Pole Vault area--one	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Shot Put areas--one	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

PART V. DRESSING SHOWER, LOCKER AREA

Rate the following facilities as you see them in the school program as well as when they are to be used with the community recreation program.

1. Should dressing rooms be made available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Baskets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Benches with clothes hooks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Lockers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Toilet facilities in dressing room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Toilet facilities separated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Towel room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Drying room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
9. Instructor's office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Toilet facility in instructor's office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Should shower rooms be made available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Shower head--child height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Shower head--adult height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Shower in instructor's office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

PART VI. INDOOR INSTRUCTION AREAS

The facilities for instructing are generally lacking in sufficient space. Do not figure the minimum but keep in mind what you consider to be essential

1. One gymnasium separated from cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Two gymnasiums separated from cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Gymnasium & cafeteria combined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Gymnasium divider for two stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Portable stage for gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Separate gymnasium for primary grades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
7. Stage connected to gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Use as auditorium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Gymnasium 40' x 60'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Gymnasium 50' x 75'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Gymnasium 54' x 90'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Gymnasium 62' x 100'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Gymnasium 70' x 100'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Ceiling height 22'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Ceiling height 20'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Ceiling height 18'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Include basketball courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Include volleyball courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Include badminton courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Game circles & lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Shuffleboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Dance & posture room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Adaptive & weight room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Gymnastics room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Wrestling-Tumbling room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments					
The following twenty questions deal with equipment which is permanent in nature					
1. Balance Beam (high)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Balance Beam (low)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	5	4	3	2	1
	Most Essential	Usually Important	Some Importance	Seldom Important	Not Needed
3. Basketball Backboard (no. needed _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Basketball hoop 8' high	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Basketball hoop 9' high	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Basketball hoop 10' high	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Basketball hoop, adjustable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Bleachers--seating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Climbing poles (no. needed _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Climbing ropes (no. needed _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Horizontal Bar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Horizontal Ladder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Padded walls under Basketball Backboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Parallel Bars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Peg Boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Public Address System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Rings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Tumbling mats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Vaulting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Volleyball Standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					

APPENDIX I

Time has passed and I have not been able to get back to you as soon as I originally intended. I did receive your card consenting to work with me on this study and for this I am most grateful.

Please take a few minutes to study the enclosed questionnaire before you attempt to answer the questions. You must keep in mind the purposes of elementary physical education and what you consider to be a "quality" program.

This study is attempting to determine what facilities and equipment are considered to be "essential" to provide a "quality" program for boys and girls of grades 1 through 6.

Please return the completed questionnaire as soon as possible in the self-addressed envelope which requires no postage.

Sincerely,

Frank Sherman, Coordinator
Health, Physical Education,
and Athletics

APPENDIX J

DIVISION OF HEALTH AND PHYSICAL EDUCATION
 OREGON STATE UNIVERSITY
 CORVALLIS, OREGON

A SURVEY OF
 ESSENTIAL ELEMENTARY SCHOOL PHYSICAL EDUCATION
 FACILITIES AND PERMANENT EQUIPMENT

CODE NUMBER _____ STATE _____

This survey seeks responses from selected physical education personnel who can assist in determining the facility and permanent equipment items essential to conduct a quality elementary school physical education program for grades one through six.

You have been selected to participate in this study because of your interest and concern for elementary physical education. Please use the enclosed self-addressed envelope to return this survey as soon as possible.

To facilitate the answering of the survey, it is necessary to establish two sets of criteria.

1. The school should be judged as an elementary school for grades 1 through 6 with an enrollment of 350, but not over 600 students.
2. Consider those facilities and permanent equipment as essential for a quality program and not just the minimum.

The rating scale is defined as follows:

- a. Essential – required for a quality program
- b. Usually Important – contributes to a quality program but not essential
- c. Some Importance – could be of value in the program if available but not considered important
- d. Seldom Important – could be of value in a few cases but of little importance
- e. Not Needed – item does not contribute to a quality program

5 4 3 2 1
 Most Essential
 Usually Important
 Some Importance
 Seldom Important
 Not Needed

PART I. COMMUNITY SCHOOL AREA

What should be included with the community school complex. Rate each of the following items on a point basis of one to five with 5 being the most essential, 4 being next, etc....

- | | 5 | 4 | 3 | 2 | 1 |
|----------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| A. | | | | | |
| 1. Community Park School | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Accessible toilet facilities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Picnic area, including benches and tables | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Preschool play lot area | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Swim pool | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Wading pool area | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Outdoor ice skating rink | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

List additional important items.

- | | | | | | |
|------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 18. Separate primary equipment without separate area | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Rings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Slides | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Swings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Teeter-Totters | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

List additional important items.

MATERIAL UNDER APPARATUS

- | | | | | | |
|---------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 23. Asphalt | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Concrete | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Soil (without grass) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Sand | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Ground wood product, i.e. sawdust or shavings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Interlocking rubber pads | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Rubber pellets mixed with asphalt | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Synthetic turf | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

List additional important items.

PART II. OUTDOOR EQUIPMENT

Rate the following pieces of equipment according to your estimate of its importance to the school facilities and equipment.

- | | | | | | |
|------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 8. Balance Beams | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Climbing apparatus -- 9' or under | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Climbing Poles | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Creative apparatus | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Horizontal Ladders | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Horizontal Bars | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Merry-go-round | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Obstacle Course | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Parallel Bars | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Separate primary area with equipment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

PART III. OUTDOOR ALL WEATHER COURTS

The size of the all-weather surface is determined by the courts needed. Rate each of the following court areas according to your judgement of its importance for a quality program.

	5	4	3	2	1
31. Badminton Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Basketball Court - one 50 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Basketball Court - two 100 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Basketball Courts - three 150 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Basketball Courts - four 200 x 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Low organization game areas (circles, lines, and other markings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Handball (single wall, and rebound wall)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Shuffleboard Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Roller skating area with smooth surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Tennis Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Tetherball areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Volleyball Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Parking on courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

List additional important items.

COURT SURFACE AREA

44. Asphalt (blacktop)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Concrete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Stabilized Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Synthetic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

List additional important items.

PART IV. OUTDOOR FIELD AREAS

Rate each of the following areas according to your judgement of its importance for a quality program. The overlap of track areas, field games, and softball space is to be considered for multiple use of space.

48. One football-soccer field space 160' x 360'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Two football-soccer field spaces 320' x 360'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Three football-soccer field spaces 480' x 360'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. One softball diamond 150' x 150'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Two softball diamonds 300' x 150'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Three softball diamonds 450' x 300'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. Four softball diamonds 600' x 300'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Permanent softball backstops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. One portable softball backstop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. 220 yard permanent track	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. Field space for 220 yard oval track	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59. 440 yard permanent track	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60. Field space for 440 yard oval track	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61. Discus area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62. High jump area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63. Long jump pit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64. Pole Vault area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65. Shot Put area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

List additional important items.

	5	4	3	2	1
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART V. DRESSING SHOWER, LOCKER AREA

Rate each of the following items according to your judgement of its importance to a quality program.

B. 1. Separate dressing rooms for both boys and girls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Baskets for gym clothing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Clothes hooks with benches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Lockers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Toilet facilities in dressing room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Toilet facilities separated from dressing room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Towel storage and checkout room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Drying area for use after shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Instructors' offices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Toilet facility in instructors' office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Separate shower rooms for both boys and girls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Shower head at child height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Shower head at adult height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Separate instructors' showers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

List additional important items.

PART VI. INDOOR INSTRUCTION AREAS

Rate each of the following items according to your judgement of its importance to a quality program.

A. CONSTRUCTION FEATURES					
15. Separate gymnasium area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Gymnasium-auditorium combined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Gymnasium-Cafeteria combined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Gymnasium divider to locate two teaching stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Acoustical treatment in gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Portable stage for gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Padded walls behind basketball backboards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Separate gymnasium space for primary program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Permanent stage connected to gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Bleacher seating provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Public address system provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Gymnasium size 40' x 60'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Gymnasium size 50' x 75'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Gymnasium size 54' x 90'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Gymnasium size 62' x 100'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Gymnasium size 70' x 100'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Gymnasium ceiling height 22'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Gymnasium ceiling height 20'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Gymnasium ceiling height 18'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

List additional important items.

5 4 3 2 1

Most Essential
Usually Important
Some Importance
Seldom Important
Not Needed

B. COURT AREAS

- 34. Basketball area
- 35. Volleyball area
- 36. Badminton area
- 37. Game circles & lines area
- 38. Shuffleboard area
- 39. Dance area
- 40. Adaptive area
- 41. Weight room area
- 42. Gymnastics area
- 43. Wrestling area
- 44. Tumbling area

List additional important items.

The following items deal with equipment that is permanent. Rate each item according to your judgement of its importance to a quality program.

- 45. Balance Beam (high)
- 46. Balance Beam (low)
- 47. Basketball Backboards
- 48. Basketball hoops 8' high
- 49. Basketball hoops 9' high
- 50. Basketball hoops 10' high
- 51. Adjustable basketball hoop
- 52. Benches
- 53. Bouncing planks
- 54. Cargo net
- 55. Climbing poles
- 56. Climbing ropes
- 57. Climbing frame (portable and adjustable)
- 58. Horizontal Bar
- 59. Horizontal Ladder
- 60. Parallel Bars
- 61. Peg Boards
- 62. Stall Bars
- 63. Still Rings
- 64. Traveling Rings
- 65. Trampoline
- 66. Tumbling mat
- 67. Wrestling mat
- 68. Vaulting Box
- 69. Vaulting Buck
- 70. Net standards (multiple use)
- 71. Spring board
- 72. Weight training equipment

List additional important items.

APPENDIX K

525 Mill Street
Springfield, Oregon
October 27, 1972

To: Elementary Principals

It has been a concern for many years on what kind of equipment and facilities should be supplied in the elementary schools for playground use, for physical education, and after school sports. Research has not been done in this area to determine how elementary administrators feel or if they really want to be involved.

This study has been conducted on a national level and is being used to evaluate the elementary schools in Oregon. Your school has been selected because of the enrollment size. Therefore, it will be included as part of this study in determining what is actually being provided in the Oregon schools today.

Please take a few minutes to fill out this questionnaire and return it immediately in the self-addressed envelope. The results of this study will be made available to all school administrators in Oregon later this year or the early part of next year. Thank you for your assistance in this most important study.

Sincerely,

Frank Sherman, Coordinator
Health, Physical Education
and Athletics

4. Creative Apparatus
 yes no
5. Horizontal Ladders
 yes no
6. Horizontal Bars
 yes no
7. Separate primary area with equipment
 yes no
8. Does your school use the interlocking rubber pads under the apparatus on the playground?
 yes no

DOES YOUR SCHOOL PROVIDE THE OUTDOOR ALL-WEATHER COURT AREAS LISTED BELOW?

9. Low organization game areas (circles, lines, and other markings)
 yes no
10. Tetherball Areas
 yes no
11. Volleyball Courts
 yes no
12. Asphalt (blacktop) surface for Courts
 yes no
13. One Football-Soccer field space 160' x 360'
 yes no
14. Permanent Softball Backstops
 yes no

DOES YOUR SCHOOL PROVIDE THE DRESSING SHOWER LOCKER AREAS LISTED BELOW?

15. Separate dressing rooms for both boys and girls
 yes no
16. Lockers
 yes no
17. Toilet facilities in dressing room
 yes no

18. Instructor office in the dressing area
 yes no
19. Toilet facilities in instructor's office
 yes no
20. Separate shower rooms for both boys and girls
 yes no
21. Shower head at child's height
 yes no
22. Separate instructor's shower
 yes no

DOES YOUR SCHOOL PROVIDE INDOOR INSTRUCTION AREAS
 LISTED BELOW ?

23. Separate gymnasium area
 yes no
24. Gymnasium divider to locate two teaching stations
 yes no
25. Acoustical treatment in gymnasium
 yes no
26. Padded walls behind basketball backboards
 yes no
27. Gymnasium size 70' x 100'
 yes no
28. Gymnasium's ceiling height 22'
 yes no

DOES YOUR SCHOOL PROVIDE INDOOR COURT AREAS LISTED
 BELOW ?

29. Basketball courts
 yes no
30. Volleyball courts
 yes no

31. Game circles and game lines
() yes () no

32. Tumbling area
() yes () no

DOES YOUR SCHOOL PROVIDE THE PERMANENT INDOOR
EQUIPMENT LISTED BELOW ?

33. Balance Beam (low)
() yes () no

34. Basketball Backboards
() yes () no

35. Adjustable Basketball Backboards and Hoops
() yes () no

36. Climbing Ropes
() yes () no

37. Horizontal Bar
() yes () no

38. Horizontal Ladder
() yes () no

39. Tumbling Mats
() yes () no

40. Vaulting Box
() yes () no

41. Net Standards (multiple use)
() yes () no

APPENDIX M

PERSONS USED FOR THE LOCAL JURY

Dr. Corlee Munson
Elem. Phys. Ed. Dept.
University of Oregon
Eugene, Oregon

Mrs. Norma Gilbert
Physical Education Specialist
Centennial Elementary School
Springfield, Oregon

Mr. Glen Norris
Elem. Phys. Ed. Dept.
University of Oregon
Eugene, Oregon

Dr. Robert Bergstrom
Physical Education Department
Oregon State University
Corvallis, Oregon

Dr. Don Megale
Dept. of Phys. Ed.
Oregon State University
Corvallis, Oregon

Dr. James Long, Director
Health, Phys. Ed. and Recreation
Oregon State University
Corvallis, Oregon

Mrs. Blanche Peters, Principal
Yolanda Elementary School
Springfield, Oregon

Dr. Lee Ragsdale, Director
Health and Physical Education
Portland State University
Portland, Oregon

Mr. Leon Keefe
Physical Education Instructor
Camp Creek Elementary School
Springfield, Oregon

Mr. Virg. Erickson, Coordinator
Physical Education
Eugene Public Schools
Eugene, Oregon

Mr. Roy Crain, Principal
Riverside Elementary School
Roseburg, Oregon