SCHOOL GROUNDS AND SCHOOL ARCHITECTURE FOR THE SCHOOL OFFICERS OF MICHIGAN, BULLETIN NO. 30, 1908

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649231362

School Grounds and School Architecture for the School Officers of Michigan, Bulletin No. 30, 1908 by L. L. Wright

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

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Trieste

A Study of the Grounds and Architecture of the

Schools of Michigan

By the State Superintendent of Public Instruction

Bulletin No. 30, 1908.

SCHOOL GROUNDS

AND

SCHOOL ARCHITECTURE

FOR

THE SCHOOL OFFICERS

OF

MICHIGAN

1908

L. L. WRIGHT

Superintendent of Public Instruction

"Given a good teacher, a schoolroom constructed, heated and ventilated according to approved methods, and a healthy public sentiment in a rural school district, and the best city school cannot furnish more wholesome and stimulating conditions for the education of the children of our cities, than our rural schools favored by such conditions, do for the children in country districts."

"Children as well as older people are affected by their environments, and nowhere is this more clearly shown than in the schoolroom. The silent beauty radiating from the harmoniously tinted walls and ceilings; from beautiful decorations consisting of pictures, casts and plants, quickens and purifies the taste. Such beauty of surroundings has a subtle, silent, ethical influence which is not so much seen as felt."

SCHOOL GROUNDS AND SCHOOL ARCHITECTURE.

Some years ago the Department published a pamphlet on the subject of school architecture. The calls for this pamphlet have been so numerous that the edition is exhausted, and I therefore deem it advisable to issue a second pamphlet on the same subject.

Until recent years little attention was given to the matter of school architecture, Contracts were let to builders who had no experience or training along the line of sanitary science or architecture, and as a consequence our state is dotted over with school buildings, both in country and city, which are insanitary, improperly constructed, poorly lighted and without proper means of ventilation,

Within the past fifteen years architects have begun to give special study to the subject of school architecture, and researches in sanitary science have brought out ideas which if incorporated into our school buildings will prevent much sickness, and also prevent that too frequent occurrence, of young people breaking down during their school career. In almost every instance where young people have been obliged to leave school because of failing health the cause has been ascribed to matters which are not connected with the school, and we find that in a large number of cases the direct cause of these break-downs is improper light, heating, ventilation and sewage.

In constructing school buildings it should be a cardinal principle that we do not need highly ornamented and elaborate buildings, either interior or exterior. The towers and minarets and alcoves which we find in many school buildings are absolutely useless and in many instances unsightly and the money expended for them would produce much better results if it were used in installing proper heating and ventilating plants, and in providing suitable pictures and statuary and other works of art. In other words, the construction of a school building should be such as will assist in producing a healthy mind in a healthy body.

It is impossible to furnish detailed plans for buildings or to give specifications for each of the plans suggested herein. School boards or building committees, if they are pleased with any of these plans, may present them to any architect or builder, who can fill in the details and furnish proper specifications for construction. We give suggested plans for one-room, two-room, four-room, eight-room, and fourteen-room buildings. All these plans have been submitted to the sanitary engineer of the State Board of Health and have been approved by him.

We desire to present in this pamphlet general suggestions in regard to school sites, water supply, interior and exterior decoration, lighting, ventilating, and decoration of school grounds.

SCHOOL SITE.

In selecting a school site, size, soil, drainage, elevation, and convenience of approach must be considered. The time is at hand when every school

district will need a site large enough for its buildings, a play ground and a school garden. A rural school site, then, should contain not less than one acre, and it would be best in almost every instance to have two acres or more. For village and city sites the largest possible area should be secured in order that the children may have proper play grounds. The playground, care and supervision by teachers and superintendent, is an important factor in the education of a child, and in the future it should be so large a factor that ample area should be secured for the school site.

The soil should be dry and porous, and if it is not so naturally, it should be artificially drained. The frontage of the lot should be about two-thirds of its depth, and it should be the brightest, most healthful and most beautiful spot in the community and in rural districts should be located as near the center of the district as possible. As one travels through our great state it is pitiful to note here and there, on the corner of a highway or a four corners a schoolhouse standing on a bare plot of ground, where no attempt has been made to decorate or ornament the lot, where the fences are unsightly and the outbuildings are a disgrace to a civilized community. The early settlers of Michigan were anxious to destroy the forests in order that they might have the soil to cultivate, and in their eagerness they destroyed all trees, shrubs and vines within their reach, and we are just now beginning to realize the value of these things and are beginning to plant vines, shrubs and trees in our own home yards. Why should not the entire community unite in treating the school site as we treat our own home yards? I would suggest that the school board should interest the people of the district, the teacher and the children in the planting of trees, shrubs and vines, and I would suggest in every case that those which are indigenous to Michigan should be planted on the school site. Let me suggest a few.

For trees: the maple, tulip, walnut, poplar, birch, and elm. For smaller trees and shrubs the dogwood, sumach, witch hazel, prickly ash, and many others. For vines: bittersweet, woodbine, ivy and grape.

The trees should be planted in groups or groves, and the shrubbery should be planted in masses with large open spaces of lawn. Avoid rows and straight lines. Each outbuilding should be screened by a mass of shrubbery consisting of sumach, witch hazel, prickly ash and others. The vines should be planted so as to grow upon the buildings and twine around the fences. Straight lines are to be avoided even in the walks.

A community cannot afford to sacrifice quality of soil, sightliness, elevation and drainage to the single item of central location. The site should be elevated but not on a bleak hill. The school building in rural districts should be located near the center and slightly to the front of the lot, leaving the rear of the lot for the play ground, the front part of the lot to be reserved for trees, shrubs planted in groups, with large open spaces. The outbuildings for boys and girls should be located in the rear corners of the lot and the wood or coal house in the rear of the school building and comparatively near to it.

The area at the sides of the building may be decorated with flower gardens in which shall be planted perennial bulbs and shrubs, also plots of ground for annual flowering plants.

The value of such decoration in a school lot cannot be estimated. The influence of these surroundings will enter into the lives of the children and will stimulate them to a love of art and beauty, and influence their entire life.

WATER SUPPLY.

Section 4679 of the School Laws requires that the school board shall provide a water supply for the school. This means that they may put down a well on the school grounds or rent the use of some near-by well. This law applies more particularly in rural districts. An open well should not be permitted on the school grounds. In all villages and cities where there is a public water supply, the school rooms should be provided with drinking fountains and thus do away with the insanitary nuisance of drinking cups and water pail.

In rural districts where there is no public water supply the schoolroom should be provided with a wash sink, and over it a water tank, closed, and provided with a faucet. Each child should then have his own drinking cup. In this way we can protect the health of the children and the cleanliness of the schoolroom both of which are vital points in the training of childhood.

OUT BUILDINGS.

For rural schools the outbuildings should be located in the rear corners of the lot, and never side by side. For the average school they should not be more than six feet square and seven to eight feet high. They should be thoroughly sand painted, inside and out, and enclosed by a tight board fence seven feet high. This fence should be constructed about four or five feet from the buildings.

The receptacle under the building for secreta should be of cement, water tight, and open at the rear for convenience in cleaning. Proper urinals with drainage into the soil should be provided either in the boy's closet, or better, on the inside of the fence above mentioned. The closets and urinals should be thoroughly cleaned frequently and the contents of the closet vault or receptacle should be covered with dry earth or coal ashes daily. The purpose of the cement vault is to prevent drainage into the soil and thus prevent possible contamination of the water supply. The contents of the vault should be taken out, thoroughly disinfected, or burned, at least once each term.

The matter of caring for these buildings is absolutely in the hands of the school board, and if there are any abuses the board is the proper legal body to see that they are corrected. The board should not attempt to shift responsibility upon the teacher or upon the big boys, although it would be a good plan for the board to consult with the large boys and secure their interest and co-operation in the care of these buildings, as well as the general care of the school property. The point we wish to emphasize is that the school board is absolutely responsible for the proper care, cleanliness and sanitation of the school property.

THE SCHOOL BUILDING.

(a) Basement. Every school building should have a basement. Enough of this basement should be above ground, that the windows shall be large and afford ample light for any use that may be desired to make of the room.

When a basement is not possible, the foundation walls should be of stone laid in cement, with small ventilators in each of the four sides. These ventilators may be made of three-inch tile extending through the walls, but

every rural school as well as village and city school should if possible have a fine, light, airy basement.

This basement under a rural school building may be partitioned for furnace room, a workshop and a kitchen. In the work shop, at an expense of from $25 to $50, three or four benches with manual training outfit may be placed. This will give an opportunity for the teacher to instruct the boys in the use of common tools and give them an opportunity to construct home-made apparatus for work in science and agriculture, also an opportunity to apply much of the ordinary academic knowledge to every-day practical uses and thus secure what all our people often ask for, "instruction in practical things."

In another apartment may be installed a cook stove, a table and a few cooking utensils, and these will give the teacher and the girls an opportunity for preparing warm dinners, and for gaining wholesome lessons in domestic economy.

All this is a "practical education" and can be secured at very small cost.

If the basement is not used for these purposes it may be used for a play room on stormy days.

The basement should be at least eight feet high, floored with cement, and there should be constructed on the walls cupboards and lockers in which may be placed dinner pails, tools, apparatus, kitchen utensils and other material so valuable for school work.

(b) Superstructure. The building, whether in rural district or city district, should be simple in construction and without unnecessary ornamentation. It should be made of good material and as nearly fire-proof as possible. Recent events have brought home to our people the importance of careful schoolhouse construction, and above all fire-proof schoolhouse construction. School boards and building committees should insist that in the construction of school buildings in all villages and cities, all material shall be of the best and that fireproof construction shall be used throughout. It should always be remembered that it is the interior of the school building that the children and teachers use, not the exterior, and instead of spending money to adorn the exterior it would much better be used in adorning the interior and in making the interior convenient, homelike and sanitary.

If one will ride through the country in Michigan he will be struck with the fact that our schoolhouses are nearly all constructed on the same model, an oblong building with three windows on each side, two at each end, a door in the front, an exterior or interior hall or entry way, a chimney at the wrong end of the building, the stovepipe running over the heads of the children, and altogether what may be called the "salt box" pattern after the log schoolhouse plan imported from our New England ancestors. This condition, no doubt, has arisen from the fact that the great majority of rural schoolhouses have been constructed by builders who had no experience or training other than that secured in erecting barns. A little time and thought on the part of any builder could produce a school building that would combine beauty of structure with convenience of interior.

In the older villages and cities of the state, we find the school buildings that were constructed from twenty-five to fifty years ago almost uniformly three-story structures, with shallow basements, steep stairways with heavy risers in the stairs, dark hallways, insufficient lighting and no means of ventilating except by windows and doors. These buildings were constructed by men who had no training in architecture or sanitary science, and they evidently thought that the higher they could make the buildings the purer air the