

1947

## A plan for a new elementary school.

Christopher K. Rallis  
*University of Massachusetts Amherst*

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# A PLAN FOR A NEW ELEMENTARY SCHOOL



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**A PLAN FOR A NEW ELEMENTARY SCHOOL**

by

**CHRISTOPHER K. RALLIS**

**Problem submitted in partial fulfillment of the  
requirements for the Master of Science degree  
in the Graduate School of the  
University of Massachusetts**

**Amherst, Massachusetts  
1947**

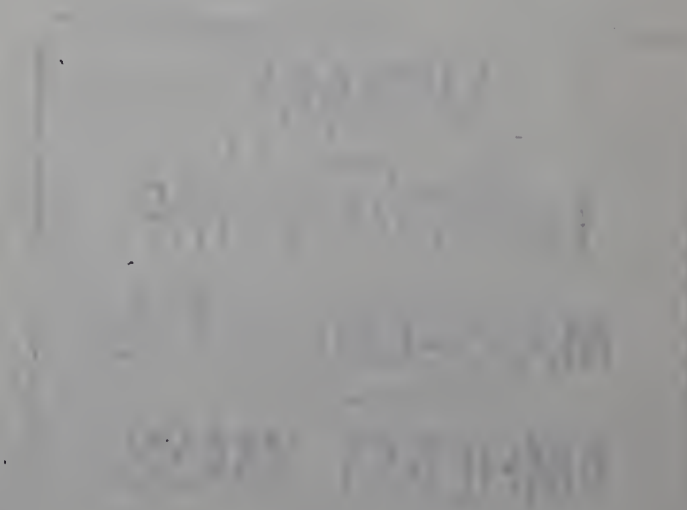


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A PLAN  
FOR A NEW ELEMENTARY SCHOOL

CHAPTER I

THE INTRODUCTION

## CHAPTER I

### THE INTRODUCTION

It is the exceptional parent who is in a position to choose the primary school or grammar school to which his children go. Most of us must use the educational facilities provided by the State. They alone are available and within our financial means. "Only a fraction of the children of grammar school age in this country attend privately supported institutions."<sup>1</sup>

There never has been in history an experiment in school and society comparable to our system of free public instruction. There is nothing like it in the whole world at the present time. Free general education even in Europe is usually confined to those who show that they belong to an intellectually superior caste. We try to train everybody.

Many times over our schools have come in for a share of criticism. "There are those who, while willing to admit that all things considered, the public schools are an educational marvel, nevertheless maintain that the mediocrity in thought and the pattern-mindedness of contemporary Americans are almost wholly

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1. Bell, Bernard I. Common Sense in Education p 99

due to certain deplorable defects now bound up in the system. The parent who is conscientious and alert will seek to know what those defects are and endeavour himself, in the case of his own children, to counteract and to supplement."<sup>2</sup>

It is with some of these views in mind that the suggested Lockwood School is patterned and proposed for construction and function.

In order to establish an Elementary School and adapt it to function most adequately and advantageously it is necessary to consider some factors in child development. In children from the fourth to the eighth year, the following characteristics are noticeable:

Physically, the boy or girl grows very rapidly in height and weight. The child demands and indeed must have large opportunity for physical activity both in work and play, and is apt to be restless and consequently cannot be quiet for any long period of time. Because of this factor in child development, shorter hours with recess and possibly a half a day of school is sufficient. Furthermore the curriculum in the elementary grades consonant with the child development would provide for tasks that would involve maneuvering with toys and objects. The old fashioned school room with its long hours, its rigorous discipline, its demand for silence and regularity is painful and frequently harmful at this stage of development.<sup>3</sup>

Play and work during the whole six years of kindergarten and primary grades should be intermingled.

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2. Ibid. p 101

3. Ibid. p 76

In the pupil's own mind they are one. In the beginning, all that can be expected of a pupil is along the lines of imitative activity. "Perhaps all that may be expected in the way of formal learning is that the child of eight should be able to read simple things with a fair amount of ease, to observe with affectionate but not necessarily discriminating interest the phenomena of nature and to do simple sums in arithmetic."<sup>4</sup>

At about the age of eight the boyhood and girlhood period begins which lasts about six years for boys and five for girls. Expansion is now a matter of the brain which assimilates and organizes itself to a considerable degree. This is the period wherein the girl and boy are able to distinguish between imaginative reality and objective reality. Ability to read develops rapidly with practice. The child becomes an egoist. He or she is given to rivalry and to competition.

The grammar school period finds the youngsters receptive to formal discipline as was the case in the early days. The child wants to know facts, wishes to acquire a vocabulary and enjoys mental competition.

"Grammar school period is the time for the youngster to commit to memory grammatical rules; learn multiplication tables; store into his memory geographical information; learn chronological tables; memorize poetry,

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4. Ibid. p 79

even though he cannot appreciate the meaning and recites it with a slap-dash accuracy that would drive any poet mad."<sup>5</sup>

Thus in this practical aspect the problem of Lockwood School takes the form of the construction of a good physical plant containing a course of study which harmonizes with the natural history of the growth of the child in capacity and experience. The question before us as we embark on our suggested school is the "selection of the kind, variety, and due proportion of subjects answering most definitely to the dominant needs and powers of a given period of growth, and of those modes of presentation that will cause the selected material to enter vitally into growth."<sup>6</sup>

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5. Ibid. p 83

6. Dewey, John School and Society p 89

CHAPTER II

THE SCHOOL SETTING

## CHAPTER II

### THE SCHOOL SETTING

Problem - At the present time, in the sprawling region of the village of Lockwood there are two antiquated school houses that are functioning rather inadequately. The buildings are not readily accessible to the children attending because they are not located centrally to the school populations. Furthermore, the physical facilities are very limited and, in some cases, far below the standards of a modern school building. The site of the old buildings had provision for neither playground activities, auditorium space nor hall for social activities.

Modern lighting, heating, and sewage disposal as well as lavatories and other conveniences are lacking. There is little or no symmetry and landscaping is nil. The surroundings offer no inspiration for the important task of educating the public's children.

The school of today, along with its educational facilities for the children, serves an added purpose-- that of propagating community spirit through recreational and social programs. The proposed Lockwood School would include provisions for such occasions.

Social Center - The school could be open to the community one or more fixed nights during the week at least twelve weeks a year for any activities of a social, recreational, or civic character and regularly



directed by a trained leader. The location of the school makes it a logical place for the community to gather for various events. Various kinds of meetings which could be held are debates, athletic meets and public playground activities, lectures, dramatic and musical entertainments, parent-teacher meetings, various club meetings, agricultural exhibits and discussions, and political meetings. The building could be used as a place to vote. Since the school was built by these people and they support it they should have every opportunity to utilize it.

If a program is worked out with the community to use the school certain nights of the week, then it would be wise to have certain regulations as to the care of the building etc., made known to all. Also for the nights when large activities are scheduled arrangements should be made to have an officer on duty--paid by those in charge of the event.

When certain clubs use the lunch room and facilities, a standard fee should be charged. An inventory of equipment in this room should be checked after each different group uses it so that if anything is broken or missing, the school can contact the right party to replace it.

The capacity of the proposed classrooms is thirty pupils each so this would take care of increased en-

rollment. Since Lockwood is entirely a farming region with no war industries, it is quite safe to assume that the increase will be adequately provided for in this building.

The assignment of teachers, based on present enrollment would be one teacher to Grades 1 - 2; one teacher for Grades 3 - 4 - 5; and one teacher for Grades 6 - 7 - 8.

PRESENT ENROLLMENT

East Lockwood School

Grade 1 - 3
" 2 - 2
" 3 - 2
" 4 - 4
" 5 - 0
" 6 - 1
" 7 - 3
" 8 - 1
total <u>16</u>

Lockwood Center School

Grade 1 - 7
" 2 - 5
" 3 - 4
" 4 - 2
" 5 - 9
" 6 - 5
" 7 - 4
" 8 - 0
total <u>37</u>

The enrollment for the consolidated school would be 53.

Class Grouping:

Grade 1 - 10	Grade 3 - 6	Grade 6 - 6
" 2 - 7	" 4 - 6	" 7 - 7
total <u>17</u>	" 5 - 9	" 8 - 1
	total <u>21</u>	total <u>14</u>

In the following chapters are suggestions for various phases of the proposed new consolidated school.

CHAPTER III

GENERAL SUGGESTIONS FOR NEW BUILDING

### CHAPTER III

#### GENERAL SUGGESTIONS FOR NEW BUILDING

Location and Topography--In order to develop a type of school which will adequately meet the philosophy outlined in Chapter I, the following provisions are suggested:

A white wooden structure, one story in height, with a flat roof would make an attractive building and would be harmonious with other dwellings of the community.

The building would be erected in that part of the community where it is most accessible to the group of pupils it is designed to serve. It would be in off the main highway one hundred and fifty feet so the noise and hazard of the traffic will be eliminated. The well drained, graded land which is suitable for landscaping, is extensive enough to meet future expansion if necessary. It also would provide a large playground and ample room to park school buses and cars. It is in a healthful location with an abundance of fresh air and sunlight and freedom from noises, odors and distractions.

The soil consists of

1. Hg. Hinckley gravelly loam,
2. Mf. Merrimac fine sandy loam,
3. Gf. Gloucester fine sandy loam,
4. Rs. Rough stony land,
5. M. Meadow.

The Hinckley loam soil is very hummocky, and drainage is excessive. This is poor soil, inclined to be leachy and for this reason is poor for farming but suitable for grazing and hay land.

The Merrimac fine sandy loam although not extensive, is low in organic matter, but is warm, early, and responds readily to fertilizers. The surface is fairly level and the drainage is good. The current value of this land is rather high.

The Gloucester fine sandy loam contains a noticeable quantity of stone and boulders. It is derived from glacial drift, composed largely of granite gneiss and other crystalline rocks. Rich in potassium throughout, it is also rich in nitrogen in the topsoil and subsoil but is lacking in this substance in the unweathered drift material. Phosphorus is fairly abundant, some calcium is present but there is no free lime carbonate. The soil is acid throughout.

Rough stony land includes all the steep, rough, and rock land that is of little agricultural value. It is usually covered with second growth trees common to the region. Current value per acre is little unless it contains valuable timber which is seldom the case.

The term meadow applies to all poorly drained

first-bottom land along streams, where separations into soil types could not be made. This soil material occurs in the low flood plains along streams. The surface is flat, but is cut through by streams. The current value of land of this type is relatively high.

Much land is underlaid in some places by compact sand or heavier material. It occurs in depressions, such as old lakes, streams, etc. It is usually used for pasture land and the current value is low.

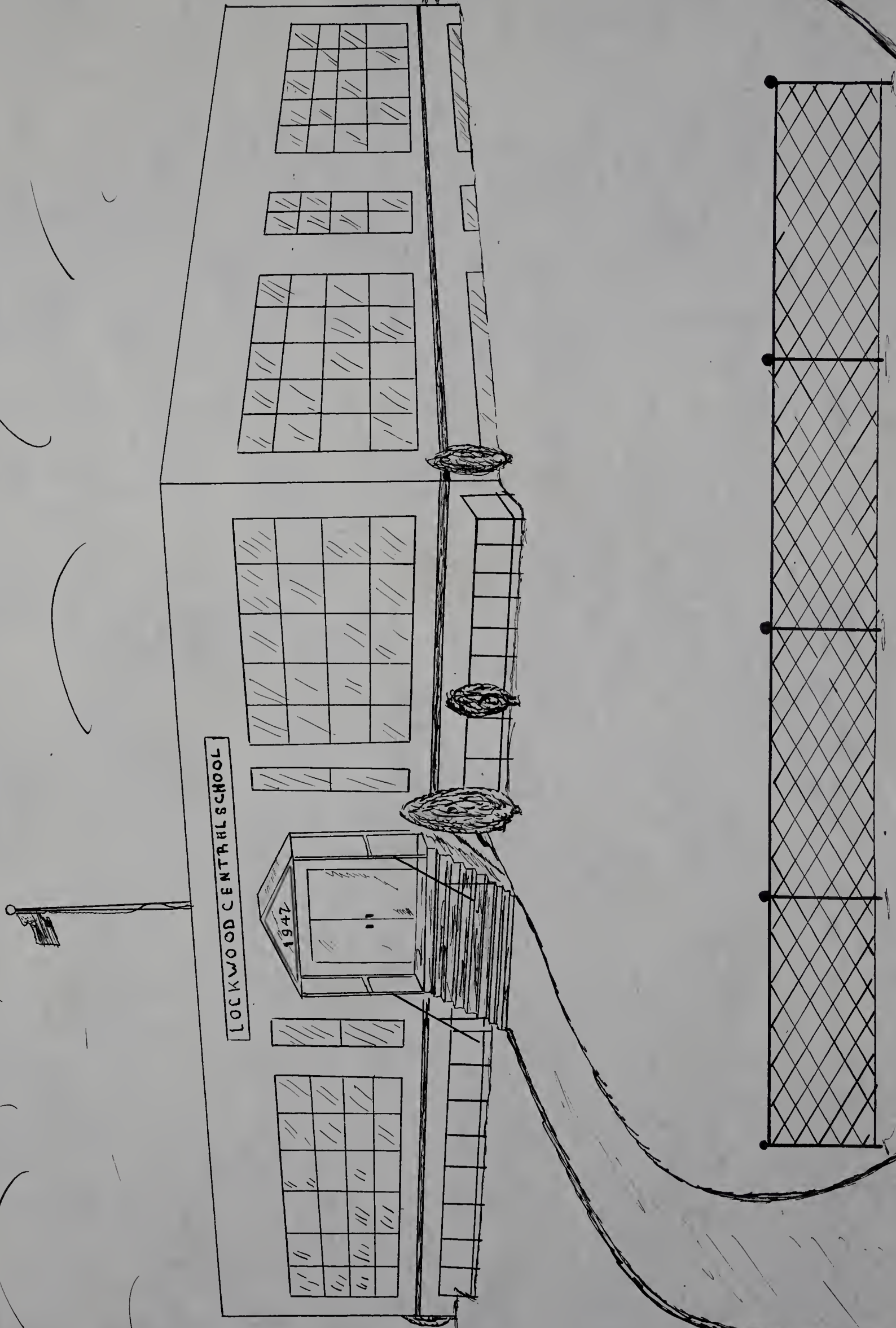
#### Placement---Style---Interior

The new building will face the east. The auditorium is to be in the central part of the building extending to the rear. In the future, if necessary, extensions can easily be added to the building without much added expense. There will be an outside entrance to the auditorium in addition to the inside school entrance which will make it more desirable and convenient for public use. A large parking area, provided near the auditorium entrance helps to eliminate traffic congestion.

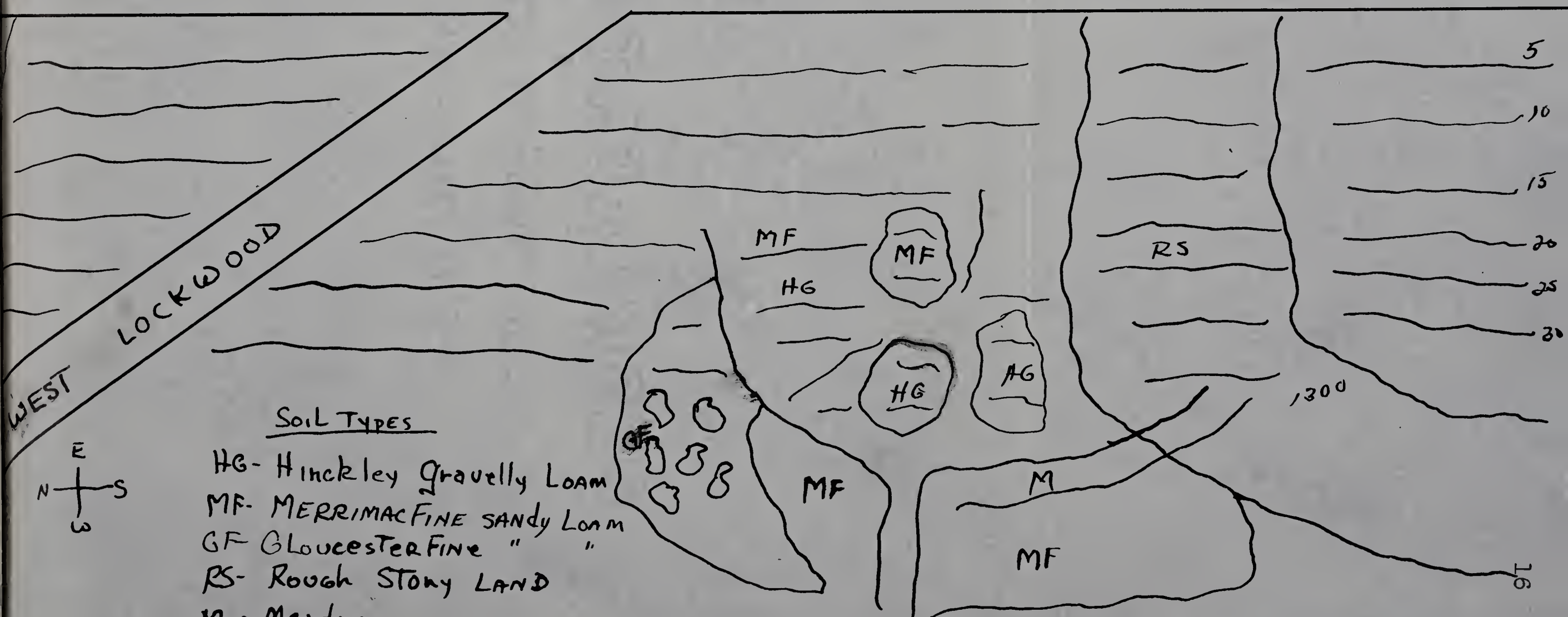
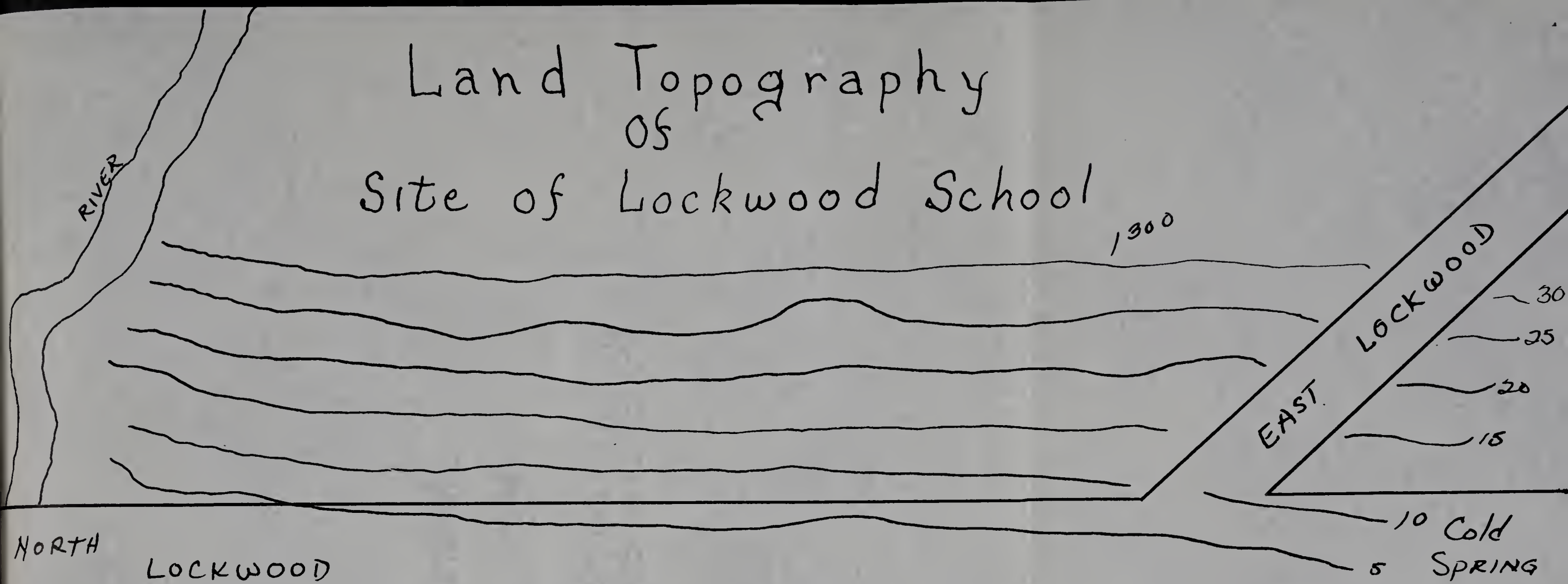
The proposed building is Class B with fire resistive construction in its walls, floors, and ceilings finished with wood.<sup>1</sup>

On the left side of the main entrance to the building lies the office and a lavatory and clinic room. On the opposite side of the corridor is the teachers' room

1. The Nation's Schools, XXXIV (Aug. 1944)

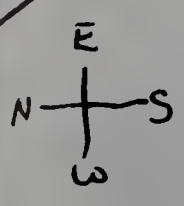


# Land Topography of Site of Lockwood School



SOIL TYPES

- HG- Hinckley Gravelly Loam
- MF- MERRIMAC FINE SANDY LOAM
- GF- Gloucester FINE " "
- RS- Rough Stony LAND
- M. - Meadow



CONTOUR INTERVALS 5'



and lavatory. On the wall of the teachers' room, facing the corridor is where the built-in display cabinet will appear.

Directly in front of the main entrance is the entrance to the auditorium. The main corridor is 12 feet while the corridor going north and south is 18 feet. On three corners of the building are classrooms, and the library is in the other corner. With this arrangement, greater window space and better natural lighting is provided.

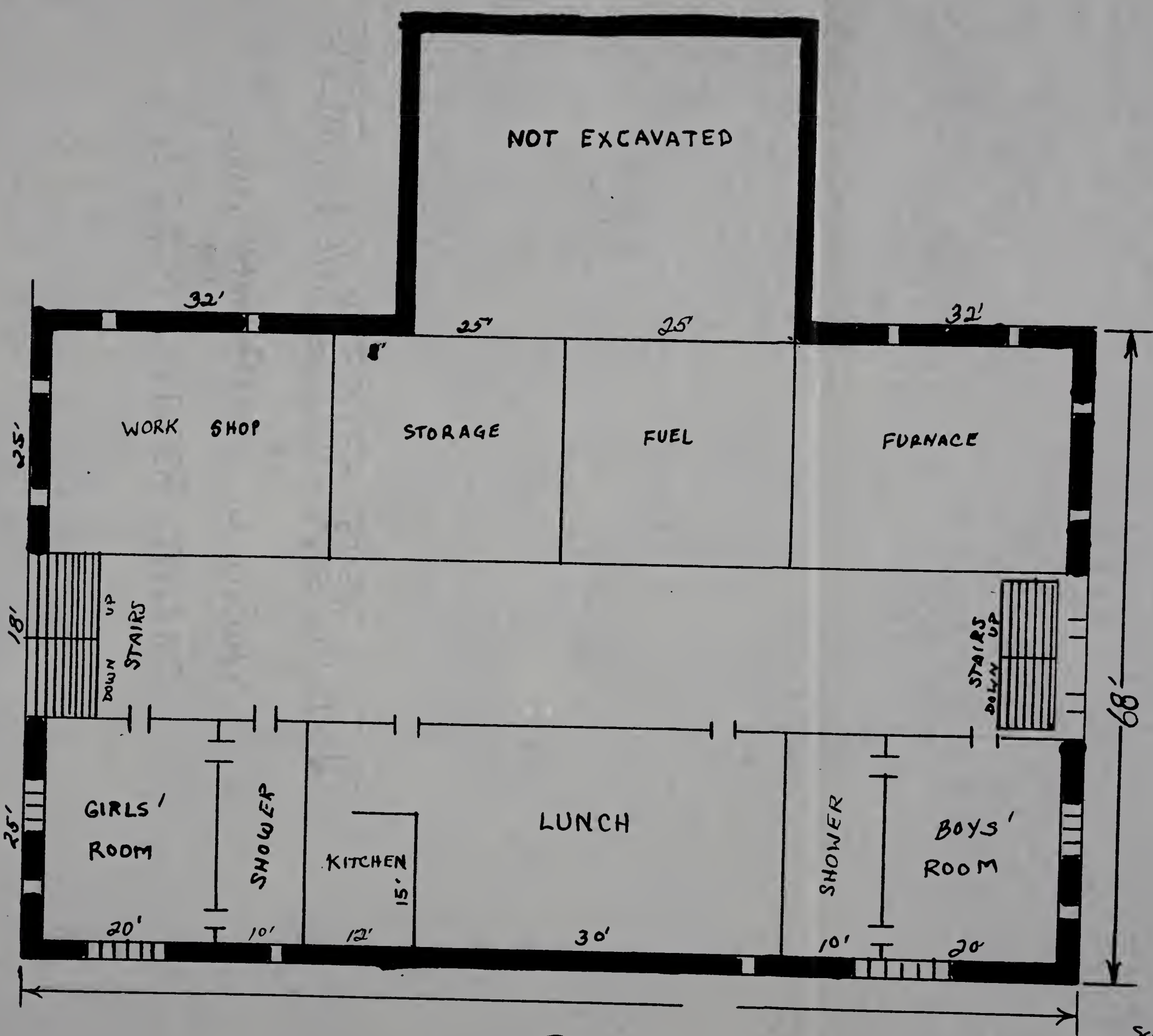
The library has an outside entrance as well as an inside entrance. The public can use it without passing through the main part of the school.

The primary room also has an outside entrance and directly outside is the playground for the small children. Since the younger pupils have a different recess time and length of school day, it will enable them to come and go without annoyance to others working in the building. Outside the primary door is the cement landing on which the children can play when the playground is wet and muddy.

The main corridor, extending north and south, has a terrazzo floor, terra cotta wainscot, acoustical plaster on the ceiling, and salmon color on the walls.

On opposite ends of the hall are the stairways leading down into the basement. They are properly encased so as to meet the requirements of the fire and

W.



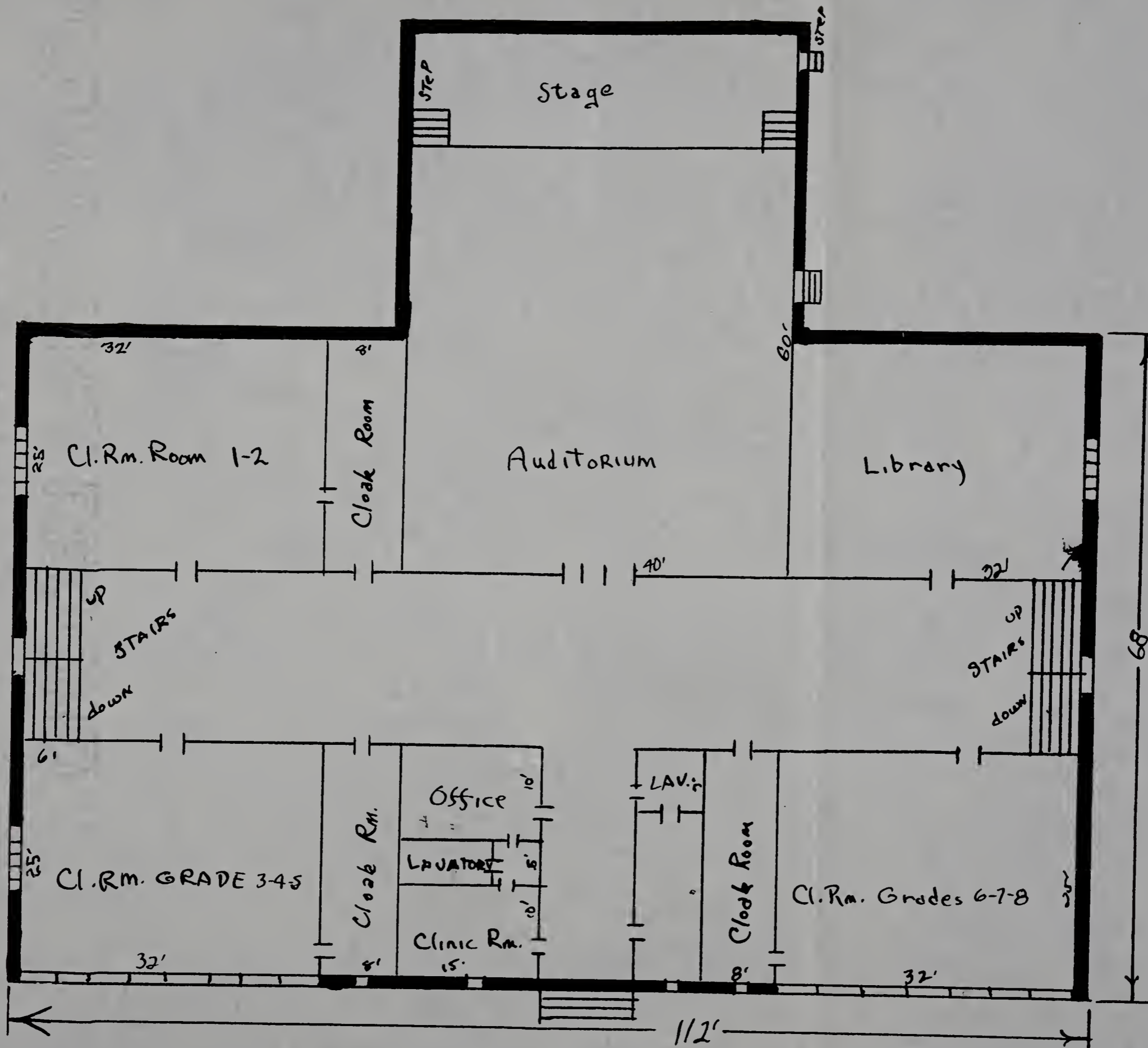
PROPOSED BASEMENT PLAN

SCALE  
1" = 1/16" of an inch

E.

S.

W.



S.

PROPOSED FIRST FLOOR PLAN

19  
N.

E.

1" = 1/16" or an inch

safety laws.

The doors of the rooms open outward. They are 3 feet by 7 feet with a glass panel about 24 inches by 30 inches in the upper half of the door. They have spring locks which makes it impossible to lock them from the inside.

The blackboards are placed at the front of the room and on the side to the right of the pupils. The material should be slate and the color black. Note the following chart: <sup>1</sup>

<u>Grades</u>	<u>Width of Boards</u>	<u>From Floor to Base</u>
1 and 2	24 - 26 inches	24 - 26 inches
3, 4 and 5	28 - 30 "	28 - 30 "
6, 7 and 8	30 - 36 "	30 - 32 "

Placed above the chalkboards could be some serviceable cork material to be used as a bulletin board. Bulletin boards should be the same width as blackboards and placed at the same height.

Each classroom should be equipped with a flat topped desk with drawers on each side, a solid back, and a first-class swivel chair with a spring seat. All classrooms should have a book case large enough to meet the needs of its teacher and pupils. There should be movable seats and desks in each room. The advantage of these is that the room can be quickly cleared for cleaning or for any other use by the students or public.

The primary room should have low book cases,

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1. The Nation's Schools, XXXIV (Nov. 1944)

attractively arranged for their library. Movable desks and chairs and a low table with small chairs should be provided giving the children opportunity to work together on projects assigned them. A small round table and a few chairs could be arranged near the fireplace where the children may enjoy reading. At least one cupboard, easily accessible to the children, should be provided for boxed games and puzzles.

A low table-like desk with compartments could be stood near the side windows, on top of which might be placed the victrola, fish or turtles. The compartments should contain paper, scissors, paste jars, etc.--supplies the children can get themselves and return. To permit the children to paint, a few easels should be placed in a convenient corner of the room. On an adjacent shelf paint brushes and paint should be available. A good arrangement is to have small wooden cheese boxes or something similar, in which to keep several jars of paint. These should be checked each morning to be sure they are ready for use.

There should be a good supply of clip clothes pins so that the children can clip their overshoes, mittens, etc. together in the cloakroom. Also each child should be assigned a definite hook--those of

the small children are to be marked with their name on the card below the hook.

The boys' room and the girls' room are at opposite ends of the hall in the basement. Combined with each room are the showers. The floors in these rooms and the tile wainscoting are of neutral color and attractive design. Also in the basement are the lunch room, furnace room (adjacent to which is the room where the fuel is stored), a supply room to store school supplies, and a room that may be used as a workshop for the art classes or for manual training, if later on it becomes a part of the curriculum. The basement floor is cement; the walls concrete with cement plaster inside and outside. Although it costs a bit more to build a basement, it is very worthwhile, for it makes the rooms above dryer, warmer and more free from ground air.

Opaque shades at the rear windows and more transparent ones at the side windows can be adjusted to meet the requirements of varying lights. Shades may be fastened at the top and bottom of the windows. Double shades may be provided at the meeting rails and arranged to pull up and down.

At least two windows should be provided with glass ventilators so that the window can be raised without putting a direct draft on the pupils that are sitting near them.

Classrooms should be provided with thermometers so that the teacher can frequently check the room temperature.

The Library - In the library, on the shelves around the walls, books and the current magazines should be available.

The library equipment includes:

1. Reading tables. These tables should have dimensions of three by five feet. They should be substantial, movable, without drawers or footboards and should be placed at right angles to the wall having the most windows. Two smaller tables should be included to meet the needs of the younger children.
2. Chairs. These should be light but substantial with no arms. Their height should correspond with the height of the tables.
3. Magazine rack.
4. Card catalog, case and stand.
5. Vertical file.
6. Charging desk, preferable "U" shape.
7. Charging tray.
8. Clock.
9. Bulletin boards.
10. Beautiful and meaningful decorations. (plants, pictures and murals made by the children.)
11. Other accessories such as a typewriter, book supports and supplies.

Since the library is used not only by the students but also by the community, the hours of the librarian should be suited to the needs of both.

The librarian should secure book lists and the teachers should be acquainted with them. They should be on display in the library in a suitable place. The State Department will provide lists for the elementary schools.

Other book lists are: "Graded List of Books for Children," prepared by the Elementary School Library Committee of the National Education Association. This contains a list of recommended books for pupils in each grade from the first to the ninth inclusive. It is published by the American Library Association, Chicago.

"Winnetka (Illinois) Graded Book List," compiled by Carleton Washburne and Mable Vogel, grew out of an investigation of the books which children of the different grades and ages like best to read. It is published by the American Library Association.

"Children's Reading," written by L. M. Terman and Margaret Lima, gives classified lists of books for the children of each grade from first to eighth. The publisher is D. Appleton and Company.

The kinds of books selected for the library in regards to the children's needs and interests are as follows:

1. Books should be chosen which have direct bearing on all subject matter taught in the school, for reference use and personal reading. The library must supply material for supervised study, the socialized recitation, project work, clubs, and special days. Reference books: an unabridged dictionary, a simple encyclopedia, an atlas, a handbook of facts and general information, and one volume of general History of United States.
2. Books must be selected to train in habits of observation, to aid in identifying the



stars, birds, trees, and wild flowers in all forms.

3. Some books should be chosen which will help in planning for school activities, such as boys' and girls' clubs, school entertainments, social-center work and debating activities.
4. There also should be included books which are generally accepted as the best of the world's literature, and which should be placed in the way of every child. Some are Alcott, Little Women; Carroll, Alice in Wonderland; Andersen, Fairy Tales; Macleod, Book of King Arthur; Stevenson, Child's Garden of Verses; Stevenson, Treasure Island, etc.
5. In selecting stories, those should be chosen which are strong in human interest, but which will preserve the right ideals of conduct and achievement.
6. Interesting biography should be provided for all the grades; stories of historical as well as imaginary characters.
7. Books should be included to encourage children's talents and develop skills: sports, drawing, handwork, sewing, vocations, etc.
8. The books should always be chosen with the pupils in mind, selecting those books which are easily within the student's comprehension. Included should be material for all ages and interests to aid in increasing general intelligence.
9. Only books which are written in good English, and which will contribute to the life and work of the schools should be purchased.

#### Magazine Selection

Magazines which are valuable for reference use and for leisure reading, and which are worth binding as a permanent part of the school library, should be purchased. To make the magazine material more useful, a good periodi-

cal index should be provided. The Reader's Guide to Periodical Literature, which is published by the H. W. Wilson Company, 958-72 University Avenue, New York, is one of the better periodical indexes. It is published monthly and is invaluable in the use of magazines.

Suggestions for lower grade children's magazines:

"Boys' Life"	"Little Folks"
"Child Life"	"St. Nicholas"
"Current Events"	"American Boy"
"Every Girl's Magazine"	

Suggestions for junior and senior high school pupils:

"American Boy"	"American Cookery"
"American Girl"	"Art and Archeology"
"Arts and Decorations"	"Atlantic Monthly"
"Bird Lore"	"Good Housekeeping"
"Hygeia"	"National Geographic"
"Literary Digest"	"Popular Science"
"Popular Mechanics"	"Scribners"
"Time"	"Travel"

Suggestions for magazines for teachers' use:

"Grade Teacher"	"School Review"
"School and Society"	"The Instructor"
"Elementary School Journal"	
"Journal of National Education"	
"Journal of Education Research"	

Pupils should be encouraged to use the library. Interest should be aroused by interesting posters of "Have you read this?", exhibits of new books, and special programs on the purpose of the library and its use.

#### The Librarian

The school librarian should be on a par with the

teachers of the school in personality, professional training, salary, requirements for certification and tenure. The work in the library is as important as that in any classroom. The position needs a person able to buy and to catalogue, and to issue intelligent knowledge on all sources of information desired. Also, she must have a strong yet winning personality and be able to command respect and thus keep the library a laboratory for work. At the same time she must be one who attracts students to her through sympathy, encouragement, and power to interest and inspire.

Color Scheme - Following is the suggested color scheme for the new Lockwood school:

<u>Room</u>	<u>Wall</u>	<u>Ceiling</u>	<u>Woodwork</u>
Library	Cream	White	Oak Stain
Office - suite	Blue Green	"	" "
Classroom 3, 4, 5	Ivory	"	" "
Classroom 6, 7, 8	Pale Yellow	"	" "
Corridors	Salmon	"	" "
Lunch Room	Turquoise Blue	"	" "
Storerroom	Nile Green	"	" "
Workshop	Flesh	"	" "
Classroom 1, 2	Peach	"	" "

Murals made by the students can be placed in desirable places in the corridors, classrooms and office.

A display cabinet in the main corridor for educational and publicity purposes, can have no better publicity than an exhibition of the school's own good work.

Landscaping - Suggested Planting List

<u>Name</u>	<u>Type</u>	<u>Dist. apart</u>	<u>Height</u>	<u>Rapidity of Growth</u>	<u>Time of Blooming</u>
Amer. Elm	Deciduous	50 ft.	50-100 ft.	3 yrs.	Mar.-Apr.
Sugar Maple	"	45 ft.	50- 90 ft.	6 yrs.	Apr.-May
Red Oak	"	45 ft.	50- 85 ft.	7 yrs.	May-June
Carolina Poplar	"	30 ft.	60- 80 ft.	1 yr.	April
Silver Maple	"	45 ft.	50- 60 ft.	2 yrs.	Mar.-Apr.
Hemlock	Evergreen		50- 80 ft.		Apr.-May
White Pine	"		50- 80 ft.		June

Shrubs

	<u>Height</u>	<u>Color</u>	<u>Time</u>
Honeysuckle	5-6 ft.	white, rose, pale purple	Apr. June
Barberry	2-5 ft.	yellow	Apr.-May
Japan Quince	3-6 ft.	red	March-April

Climbing Vines

Boston Ivy - small (green) grows rapidly and is sturdy.

Climbing Roses (pink, red and white)

CHAPTER IV

SUGGESTED SPECIAL SERVICES

## CHAPTER IV

### SUGGESTED SPECIAL SERVICES

#### The Systems - Heating and Ventilation

The heating and ventilating system have the following basic characteristics:

1. Steel boiler, stoker-equipped. A place should be provided for another boiler and chimney capacity should be adequate to permit future additions. Fuel used is coal.
2. A central supply fan for classrooms should be had and a separate fan for the auditorium. Also exhaust fans for toilet rooms. Fans are to be electrically driven.
3. An all-blast system; that is, the temperature of the air delivered to each room would be controlled by means of a double mixing damper responding to a thermostat in the respective rooms, the air delivery volume being continuous. There would be auxiliary-controlled radiant heat to compensate for downdrafts which come from large windows and exterior walls, but the radiant heat would not be designed to be sufficient in amount to permit<sup>1</sup> occupancy without operating the supply fan.
4. Every classroom would have a vent flue leading out of the room to join a trunk line duct. This duct would permit air recirculation back to the supply fan, or escape out of doors. The arrangement would allow 100 percent recirculation while preparing the building for occupancy and would allow any desired percentage of new air from outside during occupancy. Without the automatic shutters the heat goes out the top.
5. The admission of air into each classroom would be through perforated ceiling or wall panels in each room, delivering the air downward at relatively low velocity, with about 60 square feet of distributed area.
6. For cleanliness of the air there should be provided near the supply fan inlet an electronic

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1. The Nation's Schools, Vol. XXXIII (May 1944) p 37

dust filter. This device arrests the smallest particles of every kind of dust, and may lessen materially the occurrence of communicable diseases. Also, it will reduce work on maintenance of walls, floors and ceilings.

7. The boilers, pipes, and heat transmitters would be full of water and not part water and part steam. This water would remain in circulation for indefinite periods, propelled throughout the system by an electric pump. It could be heated to steam temperature in very cold weather, but would be much less hot than steam in mild weather. There would be no traps, reducing valves, or air valves, and there would be no expense for labor for interior cleaning of the boiler heat-absorbing surfaces, since when using the same water year after year, all mud and precipitable salts in the water would have been removed.

This system would provide for maximum comfort, the hygienic well-being of the pupils, effective conditions for learning, and practical economy for the taxpayer.

The heating unit is located in the north end of the building. This arrangement has proved to be more satisfactory than a centrally located unit.

The Toilet System - Water System. - The boys' room and the girls' room are at opposite ends of the hall which aids in the supervision of these rooms. They should be marked but not conspicuously so. The fixtures should be of glazed enamel or porcelain and adjusted in size to the ages of the pupils. Wash basins in about the same proportion as the toilets are necessary in each toilet room. There should be one toilet stall and seat for each 15 girls and one compartment for each 25

boys. Each compartment, to insure privacy, should be provided with light swinging doors. The partition between the compartment should not extend lower than about 10 inches from the floor.

Glazed or porcelain urinals, each partitioned with glazed material, should be provided in the ratio of one to every 15 boys.

#### Girls' Room

<u>Number of toilets</u> - 3	<u>Size</u> - 2 average	1 small
	(9 $\frac{1}{2}$ x 11 $\frac{1}{4}$ water area)	
<u>Number of wash basins</u> - 3	<u>Size</u> - (19 x 17)	
	inches	
<u>Mirror</u> - 1		

#### Boys' Room

<u>Number of toilets</u> - 2	<u>Size</u> - average
<u>Number of urinals</u> 2	
<u>Number of wash basins</u> - 2	<u>Size</u> - average

The wall-hung type of lavatory is suggested because it simplifies the mopping of the toilet room floors. Individual faucets recognizes the advisability of washing in tempered running water. Self-closing faucets rather than those of the hand-operated type saves water.

Toilet bowls hung from the wall, with flush valve installation should be of the regular exposed hand operated type.

The stall type urinal with the drain slightly



below floor level not only takes of small children, but makes it convenient for the cleaning of both urinal and floor.

Individual showers are the best type. The control of the water temperature should be predetermined by an automatic thermostatic mixing valve which delivers the same temperature of water to all shower heads.

Water System - Lighting System. - The fountains should be placed where they are most accessible to the students. The recessed type fountain may be used in the corridors because they prevent accidents and are not a traffic obstruction in the halls. The standard head type is excellent because the lips touch neither the draining water nor the source from which the fresh water is delivered.

Fluorescent lighting with the equipment mounted at the ceiling or recessed therein is suggested while switches should be conveniently placed on the wall well inside the doors.

Protectors are provided as follows:

Gymnasium - 6  
 Library - 3  
 Lunch room - 2  
 Rest rooms - 1  
 Store room - 1  
 Janitor's room - 1

Each room should have three base plugs, one in the baseboard along the side of the room, one in the front of the room, and one in the back of the room for

the motion picture projector, etc.

An electrically run clock should be installed in each room controlled by a master program clock system.

The fire alarm system should be noncoded. It is suggested that the apparatus be of a portable type which would be placed in convenient places in the hall, auditorium, etc. Exits should be plainly marked and well lighted.

There should be a telephone installed in the principal's office.

CHAPTER V

SUGGESTIONS FOR COURSE OF STUDY

## CHAPTER V

### SUGGESTIONS FOR COURSE OF STUDY

The Course of Study - Each state publishes a course of study for the guidance of all the schools under its jurisdiction. It represents the minimum essentials to be taught. Each teacher should be given freedom and encouraged to make deviations in order to enrich the content or to improve the procedures.

All teachers should become reasonably familiar with the course of study as a whole and be thoroughly informed on the details relating to their particular work. It would be helpful to discuss the course of study at various teachers' meetings during the year, and make suggestions upon practical revisions.

The use of the course of study will have the following advantages:

1. Assist in the proper selection and gradation of materials.
2. Help to prevent overlapping the different subjects and grades.
3. Uniformity.
4. Insures progress.
5. Economizes pupils' time and effort.

The training of the child is provided for by the school in the classroom, where he receives individual and collective instruction and learns to think for himself; in the library, from which source he receives

abundant literary knowledge; and in the auditorium and on the playground, where he is able to relax and become a healthier individual both mentally and physically.

The following pages contain a sample course of study in arithmetic.

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FOREWORD

This course of study has been written for the first four grades in the Lockwood rural school. The time allotted for class work in arithmetic is fifteen minutes a day totalling seventy-five minutes a week.

The work has been divided into two semesters. The material selected makes the arithmetic functional in the child's life in this community.

The work is adapted to individual differences. Children of ability should be given work difficult enough to challenge their intellect. Children below average should be given extra drill so as to enable them to master those phases of arithmetic that come within their range of comprehension.

ARITHMETICGENERAL AIMS OF THE COURSE OF STUDY

The course of study should be determined by the children's interests, needs, and abilities and should incorporate the following aims:

1. To present arithmetical knowledge which fits real life situations in school and social life so as to prepare the children to meet similar situations in the future.
2. To develop in the children habits of logical reasoning and thinking.
3. To give the children training in the proper habits of accuracy, speed and neatness.
4. To develop in the children knowledges and appreciations of the importance of arithmetic in life situations.
5. To provide systematic mastery of the skills.



OUTLINE OF WORK BY GRADESGrade 1Teacher Aims:

1. To develop in the child an appreciation of the importance of counting.
2. To teach the child to count concrete objects accurately.
3. To develop in the child a good number sense.
4. To encourage the child to recognize a number of objects in a small group without counting.
5. To give the child interesting things to do and at the same time develop his number concepts and his ability to use arithmetic facts in solving everyday problems.
6. To teach the child to read and write numbers correctly.
7. To impart to the child a growing understanding that numbers have a use and a meaning.

Pupil Aims:

1. To be able to count objects.
2. To be able to do the interesting problems connected with the arithmetic.
3. To be able to count so he can have charge of collecting materials.

Subject Matter:A. First Semester

1. Counting
  - (a) With objects to 10.
  - (b) Rhythmically with such games as "Ten Little Indians."
  - (c) Without objects by 1's to 20, by 10's to 100, by 5's to 100.
2. Reading
  - (a) Numbers through 100.

3. Writing
  - (a) Any number through 10.
4. Addition
  - (a) With and without objects - not exceeding 10.
5. Division
  - (a) Group of objects by 2's and 5's to 20.
  - (b) Group of objects by 3's to 15 and 4's to 12.
6. Measure
  - (a) Step
  - (b) Glassful ( This will be incidental.)

#### B. Second Semester

1. Counting
  - (a) With objects to 25.
  - (b) Without objects to 50.
  - (c) By 2's to 100.
2. Reading
  - (a) Numbers to 100.
  - (b) Numbers beyond 100, such as pages in primer.
3. Writing
  - (a) Numbers to 100.
  - (b) In sequence to 100.
4. Addition
  - (a) Combinations up to 10 (with and without objects.)
5. Subtraction
  - (a) Taught along with addition.
6. Division
  - (a) Develop the idea of  $\frac{1}{2}$  of an apple, etc.
7. Comparison
  - (a) Number and size of groups of objects of the same kind.
8. Measures
  - (a) Money values: cent, nickel, dime and quarter.
  - (b) Measures: dozen, quart, pint, inch, foot.
9. Signs
  - (a) Plus and equal.

#### Suggested Activities:

## A. Counting

1. Members of family, class.
2. Rows of seats and seats in the row.
3. Materials - pencils, crayons, scissors, etc.
4. Keeping attendance records.
5. Number of bankers.
6. Amount of bank money.
7. Lunch period - passing food, etc.
8. Pairs of arms, legs, hands, etc.
9. Characters needed in story dramatizations.
10. Lavatory procedure.

## B. Reading and writing numbers

1. Page numbers in their books.
2. Telephone numbers.
3. Scores in games.
4. Health records.
5. Calendar numbers.
6. Clock numbers.
7. Thermometer numbers.
8. Price lists.
9. Numbers from the blackboard.
10. License plate numbers.

## C. Store Unit

## D. Games

1. "Catch Rabbits" - Object - Practice on simple combinations.
2. Arranging cards - Object - To teach the serial order of numbers.
3. "Fox and Geese" - Object - Counting by 1's, 2's 5's, etc.

Suggestions as to Teacher Procedure:

The arithmetic experiences of the first grade children should deal with material which relates closely to their play experiences and everyday activities. Counting lays the foundation to all arithmetic as it is the fundamental process. This is the first aid the child gets to solve the problems of his experience. Counting should be done first with objects and then without, so the child can build up a correct number sense.

If possible, in selecting materials for counting, uniform size and color should be used. They should be easy to handle and of a large variety. A few suggestions are buttons, pegs, beans, pictures, objects in a picture, seats in a row, etc.

The children may read the numbers of pages in their books, scores in games, numbers on calendars etc. The teacher should give them help whenever they need it. She should teach writing of numbers when (1) there is a need for it, (2) when she is sure the child can read the number. They should be taught in order of their difficulty. - 1,7,4,6,9,3,2,5,8.

In teaching of addition, such combinations should be presented as a unit. The written and oral forms to be given at the same time. For example:  $3 + 2 = 5$   
 $2 + 3 = 5$        $5 - 2 = 3$        $5 - 3 = 2$ . After adequate practice the child is able to give the whole story of  $3 + 2$ .

#### Appreciation and Attitudes:

1. An appreciation of need for accuracy in counting, measuring, and the reading and writing of numbers.
2. Beginning of an appreciation of the value of money and a desire to spend wisely.
3. Beginning an appreciation of good proportions in planning the construction of anything.

#### Skills:

1. Counting objects accurately by 1,2,5,10 to 100.
2. Recognition of small groups without counting.
3. Recognition of figures at least to 100.
4. Ability to write figures to 100.
5. Mastery of a few addition and subtraction facts by all; mastery of more addition and subtraction facts by the more matured children.

#### Minimum Attainments for Grade 1:

1. Ability to count with objects to 25, without objects to 50.
2. Ability to count by 1's to 20, by 10's to 100, by 5's to 100 and by 2's to 100.
3. Ability to read and write numbers to 100.

4. Addition combinations up to 10 with and without objects.
5. Subtraction combinations corresponding with the addition combinations.
6. Ability to use intelligently the cent, nickel, dime, and quarter in money experiences.
7. Ability to use intelligently the measures dozen, quart, pint, inch and foot.
8. Ability to know and be able to use the plus and equal signs.
9. Ability to use number concepts in everyday experiences.
10. Ability to enjoy and do work neatly and accurately.

#### Testing:

Informally test the child to see if he understands and can use numbers. First Grade Number Book - Web. Co. is very helpful.

#### References:

1. Buckingham - Childhood Education Magazine - "When to Begin the Teaching of Arithmetic."
2. Morton - Teaching of Arithmetic in Primary Grades Chapter 1.
3. Stone - How to Teach Primary Numbers - Lists of games.
4. National College of Education - Curriculum Records of the Children School. This book has excellent units worked out.
5. Newcomb - Modern Methods of Teaching Arithmetic Very good suggested material and activities.

#### GRADE II

#### Teacher Aims:

1. To have the child know all abilities listed for Grade I.

2. To have the child acquire the ability to apply number facts in concrete situations.
3. To have the child understand and be able to use the arithmetical vocabulary.
4. To broaden the child's quantitative thinking in relation to his experiences in life.

Pupil Aims:

1. To know their combinations so they can participate actively in the store unit.
2. To be able to get perfect score in number combinations.
3. To be able to keep up with their class.
4. To beat their own record.

Subject Matter:

A. First Semester

1. Review counting and combinations of Grade 1.
2. Reading
  - (a) Numbers of three figures.
  - (b) Numbers to 1000.
  - (c) Roman numerals through twelve.
3. Writing
  - (a) Writing numbers to 1000.
  - (b) Addition and subtraction facts that were learned orally.
  - (c) The plus and minus signs.
4. Addition
  - (a) Addition facts not exceeding 12.
  - (b) Column addition of two numbers without carrying.
5. Subtraction
  - (a) Using combinations developed in addition.
6. Division
  - (a) Even partition of  $\frac{1}{2}$ ,  $\frac{1}{4}$  of a thing or group of things.
7. Measures
  - (a) Pint, quart, inch, foot, yard, cent, nickel, dime, quarter, half dollar, dozen, pound, week, and year.

B. Second Semester:

1. Reading
  - (a) Numbers to 1000.
  - (b) Roman numbers.
2. Counting
  - (a) By 1's to 200.
  - (b) By 2's to 200.
  - (c) By 10's to 100.
3. Reading and Writing
  - (a) Numbers of 3 figures.
  - (b) Numbers of 4 figures, if needed.
  - (c) Writing of numbers to 1000.
  - (d) Addition and subtraction combinations.
  - (e) Problems - Concrete examples involving one operation with one or two figures in the answer.
  - (f) Signs -, \$, and ¢.
4. Addition
  - (a) The 45 primary addition combinations.
  - (b) Both forms of duplicate combinations, such as,
 
$$\begin{array}{r} 10 \\ 2 \\ \hline \end{array} \quad \begin{array}{r} 2 \\ 10 \\ \hline \end{array}$$
  - (c) Single columns, 4 addends with checking.
  - (d) Two orders, zero endings, 3 addends.
5. Subtraction
  - (a) Facts corresponding to new addition facts.
  - (b) Two places, zero ending, no borrowing.
  - (c) Mastery of the 81 subtraction facts.
6. Measures
  - (a) Minutes, hour, day, and week.
  - (b) Be able to tell time by the clock.
7. Problems
  - (a) Easy one step problems, the outgrowth of actual experiences.

Suggested Activities:

1. Store Unit
2. Farm Unit
3. Garden Unit
4. Printing a Newspaper

Suggestions As to Teacher Procedure:

The teacher should begin with review of counting as listed in the first grade. Next, children count in pairs, for example: hands, eyes, ears, touching them as they count. Pegs, toys, blocks, etc., can be counted in twos, threes, fives etc. After this objective counting, the children enjoy counting rhythmically. They may count by rote from 100 to 200 by ones, twos, etc., to sense the serial order of larger numbers.

In writing numbers the teacher should help the children see the numbers correctly in copying and reading, e. g., when the number is 71, the child may call it 17. She should watch closely to be sure that no incorrect habits are formed.

In examples of 3 addends, she should make sure the pupils put one number under the other. In adding these examples cover the third number so the child can give the sum of the combination and then add the third number.

Teach reading and writing of Roman numerals in connection with the clock.

#### Appreciation and Attitudes:

1. Better appreciation of money value and spending wisely.
2. Student to take pride in his knowledge of numbers.
3. To enjoy working with numbers.
4. Desire to know more and to work more with numbers.
5. To see how numbers are useful to him in many ways.

#### Skills:

1. To be able to use the primary facts in a simple problem. To add numbers--three on figured numbers and a two-figured number to a one-figured number with some skill.
2. To check work and have it accurate.

#### Minimum Attainments for Grade II:

1. Ability to count by 1's and 2's to 200, by 3's to 30 and by 10's to 100.
2. Ability to read and write numbers to 100.
3. Ability to read and write Roman numerals to 12.



4. Automatic control of addition and subtraction combinations.
5. Automatic control of higher decade addition, no bridging.
6. Single column addition, 4 addends with checking.
7. Two order addition, zero ending, no borrowing.
8. Subtraction two places, zero ending, no borrowing.
9. Ability to tell time by the hour and half hour.
10. Ability to use intelligently the cent, nickel, dime, quarter, in money experiences.
11. Ability to use intelligently vocabulary listed.
12. Ability to think through to completion a simple one-step reasoning problem and apply it to life situations.
13. Ability to apply accurately acquired arithmetical knowledges and skills.
14. Ability to do work accurately and neatly.
15. A growing appreciation of the value and importance of numbers in the child's life.

#### Testing:

Give frequent tests to discover where the child needs more work. Tests for various abilities can be found in Morton, also in Lennes Pad 11.

#### References:

1. Morton, R. L., "Teaching Arithmetic in the Primary Grades." Chapter IV.
2. Hellegas, M. B. "Teaching Number Fundamentals" p. 15-58.
3. National College of Education - Curriculum Records of the Children School.
4. Knight, Studebaker, Ruch - "Standard Service" Bk. 11.

#### GRADE 111

#### Teacher Aims:

1. To have the child have automatic recall of number combinations.
2. To have the child have a felt need for multiplication.
3. To have the child able to decide which process he is to use in a certain situation and to use it accurately.
4. To lead the children to discover their individual

needs and to stimulate individual effort to meet these needs.

Pupil Aims:

1. To learn the "short cut" for addition.
2. To beat their own work record.
3. To have their work neat and orderly.

Subject Matter:

A. First Semester

1. Counting
  - (a) By 2's and 3's beginning with any digit.
2. Reading
  - (a) Numbers to 10,000.
  - (b) Roman Numerals through 12.
3. Writing
  - (a) Numbers to 10,000.
  - (b) Dollars and cents in decimal form.
  - (c) Any addition and subtraction combination.
  - (d) Problems involving one operation with numbers of 2 figures.
4. Addition
  - (a) Review facts of grade 2.
  - (b) Combination facts such as
 

6	16	26
<u>5</u>	<u>5</u>	<u>5</u>
  - (c) Rapid column work.
  - (d) Carrying of one or two.
5. Subtraction
  - (a) Review work of grade 2.
  - (b) Facts corresponding to addition facts.
  - (c) Subtraction with borrowing one.
6. Problems
  - (a) Involving one operation with numbers of two figures.
7. Measurement
  - (a) Dozen, pound,  $\frac{1}{2}$  pound, hour, day, week, month, year, decimal point.
8. Terms
  - (a) Recognize sum, difference, addition, subtraction.

**B. Second Semester**

1. Counting
  - (a) by 2's to 200.
  - (b) by 5's to 200.
  - (c) by 10's to 200.
2. Reading and Writing
  - (a) Numbers of 4 figures.
  - (b) Roman numerals as they occur in his experiences.
3. Addition
  - (a) Review the 45 combinations.
  - (b) Review the work of the first semester.
  - (c) Column addition of two orders not more than 5 addends.
  - (d) Three orders of two addends.
  - (e) Mixed orders not more than 5 addends.
4. Subtraction
  - (a) Review first half
  - (b) Four orders - one borrowing.
  - (c) Two borrowing in four orders.
  - (d) Check work by addition.
5. Multiplication
  - (a) Combinations as far as  $9 \times 9$  --products not exceeding 18.
6. Division
  - (a) Taught with multiplication combinations.
  - (b) Division of  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ , and  $\frac{1}{5}$  of numbers to 20.
7. Measures
  - (a) Review
    1. Time use of calendar, writing dates.
    2. Linear measures.
8. Fractions
  - (a) Review what was previously taught.
  - (b) Teach  $\frac{2}{3}$ .
9. Problems
  - (a) Practical one and two step problems.
  - (b) Simple problems with multiplication and division so that the child can judge which to use.

Suggested Activities:

The various seasons and activities often suggest interesting groups of problems. This gives the children the habit of using the arithmetic he has learned in his actual experiences. For example:

- (a) Halloween Party
- (b) Christmas Shopping
- (c) Valentine Party
- (d) School Picnic

Suggestions as to Teacher Procedure:

The pupil should be taught to read and to write "dollars" and "cents" before much written work is given. Treat the decimal point simply as a mark for separating dollars and cents. Keep the amount of money within the pupils power to image them.

A greater part of the first semester should be given to constant review of the addition and subtraction number facts.

Have the pupils learn that multiplication is a short method of addition because (1) it helps to show the pupil the meaning of multiplication, (2) it gives him a motive for learning multiplication. Introduce the teaching unit composed of multiplication combination, multiplication fact, division combination, division fact. For the multiplication combination there are the two multiplication facts,  $4 \times 6 = 24$  and  $6 \times 4 = 24$ ; for the division combination there are two division facts,  $24 \div 4 = 6$  and  $24 \div 6 = 4$ . Thus for each teaching unit there are four primary facts, except when the two digits are the same as 5 and 5, in which case there are but two facts, the multiplication fact,  $5 \times 5 = 25$ , and the corresponding division fact  $25 \div 5 = 5$ .

Teach multiplication and division facts which later will be of most frequent occurrence.

Examples involving the four fundamental processes should be given so as to develop in the child power to choose the process to apply, and to lead to the habit of using the facts and processes.

Appreciations and Attitudes:

1. Automatic recall of the basic facts and processes.

2. Appreciation of the value of close observation of small details in answering questions accurately.
3. Appreciation of the ability to read and follow directions accurately.
4. Appreciation of time-saving methods.

Skills:

1. To observe closely and plan things well.
2. To read and follow directions.
3. To do work neatly, accurately and quickly.
4. To apply fundamental processes learned in life situations.

Minimum Attainments for Grade III

1. Ability to count by 2's, 5's, and 10's to 200.
2. Ability to read and write four-figured numbers.
3. Ability to use Roman numerals as they occur in their experiences.
4. Ability to do column addition of two orders, also three orders of not more than 5 addends.
5. Ability to do mixed orders of not more than 5 addends.
6. Ability to do subtraction examples of four orders, one borrowing and four orders with two borrowing.
7. Ability to check all work.
8. Ability to do any multiplication combination whose products do not exceed 18; also, to do the division combinations which correspond.
9. To be able to take  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$  of numbers up to 20.
10. To be able to do practical one and two step problems; also problems of multiplication and division.
11. Ability to do work accurately and neatly.
12. Ability to appreciate and understand the need for time-saving methods in doing arithmetic.
13. Ability to think out problems.
14. Ability to enjoy doing his work well.

Testing:

Testing should be done at regular intervals so the child can see where he has to work a little harder. Give extra drill on combinations that need it most. Two good books that have tests for accuracy and speed are: (1) My Arithmetic Tablet by T. Schlierholz published by the Webster Publishing Company. (2) N. J. Lennes Book III, published by the Laidlaw Brothers. Both of these books have a chart for the child to keep track of

his own record from day to day. In the textbook they will use, Standard Service Arithmetic, there is adequate prepared testing.

References:

1. Bonser - The Elementary School Curriculum p 243-246. Very good projects suggested.
2. Stone - How to Teach Primary Numbers Chap. IV.
3. Morton - Teaching Arithmetic in the Elementary School.
4. National College of Education - Curriculum Records of the Children's School p 120-150. (Suggested Units.)
5. Standard Service Arithmetic for Grade III. Textbook.

GRADE IV

Teacher Aims:

1. To have the children appreciate the use of arithmetic in life situations.
2. To have the children develop the ability to recognize and solve ordinary problems connected with the business of living.
3. To have the children form correct habits in doing the fundamental processes.
4. To have the children understand and enjoy the processes of arithmetic.

Pupil Aims:

1. To know and understand the fundamental processes and use them in life experiences.
2. To be able to do his work quickly, neatly and accurately.
3. To improve his own record.

Subject Matter:

A. First Semester

1. Reading and writing of numbers through six places.
2. Counting - all digits.
3. Addition
  - (a) Finding the sum of two numbers of two figures each totaling 100.

- (b) Speed and accuracy in adding columns of as many as 6 addends of one figure each, using all possible combinations and stressing particularly those found to be most difficult.
4. Subtraction  
 (a) Finding the difference between numbers of two, three, and occasionally four figures each.
5. Multiplication  
 (a) Review all combinations without carrying.  
 (b) Introduce examples carrying one place.
6. Division  
 (a) Examples with one figure divisor, no remainder.
7. Denominate Numbers  
 (a) Liquid Measure - pint, quart, gallon.  
 (b) Dry Measure - peck, bushel.  
 (c) Weight - ounce, pound.  
 (d) Linear Measure - inch, foot, yard.  
 (e) Time - second, minute, day, week, month, year.
8. Use of ruler.  
 (a) The  $\frac{1}{2}$ ,  $\frac{1}{4}$ , and one inch.
9. Fractions  
 (a) Review  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$ .  
 (b) Express the relation of one group of quantity to a larger one. Ex. If John has 5 marbles and loses one of them he loses "one of the five" or  $\frac{1}{5}$ .
10. Problems  
 (a) Any problems involving the use of the fundamental processes.

B. Second Semester:

1. Reading and writing numbers through seven places.
2. Addition  
 (a) Use 7 addends of one order, two orders.  
 (b) Use 4 addends of three orders.  
 (c) Drill on endings, such as  $\begin{array}{r} 28 \\ 5 \\ \hline 36 \\ 5 \\ \hline \end{array}$   
 (d) Drill for accuracy and speed.  
 (e) Tests and practice.

## 3. Subtraction

- (a) Tests for accuracy and speed.
- (b) Tests and graded practices.

## 4. Multiplication

- (a) Extend to numbers of 3 figures in multiplicand and 2 in the multiplier.
- (b) Two figure multiplier, no cipher.
- (c) Cipher in tens place in multiplier.
- (d) By 10, 100, 1000 by short method, annexing ciphers.
- (e) Proving examples by multiplication, changing places of factors.
- (f) Reading, writing, and understanding the terms "multiply", "multiplication", "product", "multiplier."

## 5. Division

- (a) One-figure divisor, with remainder.
- (b) Two-figure divisor, with remainder.

## 6. U. S. Money

- (a) Reading and writing all money expressions that the children use in daily activities.
- (b) Adding columns of 2, 3, and 4 figures in money of not more than 5 addends.
- (c) Subtracting money expressions using 2, 3, and 4 figures.

## 7. Fractions

- (a) Meaning - Any part of a unit.  
Ex.  $\frac{1}{2}$  dozen eggs - 6 eggs (numerical value)
- (b) Finding values
  - 1. Skill in finding value of  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{7}$ ,  $\frac{1}{8}$  of any number of 1, 2, 3, or 4 figures.
  - 2. Habit of expressing remainders in division as fractions.
  - 3. Automatic response to value of  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$  etc. in working with standard units of measure. Ex.  $\frac{1}{2}$  quart is 1 pint.

## 8. Measures

- (a) Knowing equivalents to measure of liquids.
- (b) Knowing equivalents to measure of length.
- (c) Knowing equivalents to measure of weights.
- (d) Knowing equivalents in dry measure.

## 9. Problems



- (a) Solution of simple 1-step problems dealing with real life situations.
- (b) Habit of studying problems to find what they tell, what they ask and to determine how to find the solution before starting to write on paper.
- (c) Determine processes to use.
- (d) Approximating answers.
- (e) Ability to explain problem, to give the example and to find the correct answer.

#### Suggested Activities:

1. Health Unit.
2. Ladder Game. Ladder is drawn on blackboard in form of steps. Examples are written on each step. The child reaching the top first with work correct wins.
3. Blackboard Relay. Place two sets of examples on blackboard. Divide class into two sections. At signal, the leader of each group writes the answer to an example and passes chalk to the next one. Winning side is the one having most or all examples correct.

#### Suggestions as to Teacher Procedure:

Give the children a great deal of practice on the addition and subtraction combination so that they can have automatic mastery of them.

Be sure the child understands the beginning of multiplication before you go on to further work on it. Give drill on combinations so the children can respond quickly. Do not teach the multiplication combinations in table form but as related units, such as  $2 \times 3 = 6$ ,  $3 \times 2 = 6$ .

Show the relation of multiplication to division. Teach both combinations at the same time.

#### Appreciations and Attitudes:

1. To be responsible for his own improvement.
2. That each child is a citizen of the community and the country, and that as such he has a contribution to make.
3. To have automatic mastery of the fundamental processes and understand and appreciate their use in life situations.
4. Appreciate the ability of thinking things out

for yourself and doing your work accurately.

Skills:

1. To compute accurately and economically in the four fundamental processes.
2. To apply the arithmetic in daily living.
3. To be able to think through the processes and plan work well.
4. To work quickly, neatly, and accurately.

Minimum Attainments for Grade IV:

1. Ability to read and write numbers through seven places.
2. Automatic mastery of the addition and subtraction combinations.
3. Ability to add quickly and accurately single columns of 5 addends or more, of double columns of 4 addends.
4. Ability to multiply three figure multiplicand and one figure multiplier.
5. Ability to multiply with two figures in the multiplier, zero difficulties.
6. Ability to multiply by annexing ciphers as by 10, 100, etc.
7. Ability to prove examples by multiplication.
8. Ability to do division with one figure divisor, two figure divisor with remainder.
9. Ability to read and write all money expressions within their experiences.
10. Ability to use and understand fractions that they may encounter.
11. Ability to know and use the measures of length, liquids, weights, and dry measure.
12. Ability to solve simple one-step problems.
13. Ability to determine process to use in solving problems.
14. Ability to approximate answers.
15. Ability to explain problems and give correct answers.
16. To have correct habits formed in solving arithmetical problems.
17. To enjoy doing arithmetic.
18. To have a desire to want to learn more arithmetic for use in everyday life.

Testing:

Test at regular intervals. Test for accuracy and

speed are well developed in N. J. Lennes Pad IV, published by the Laidlaw Brothers. Graded tests for this grade can be found in Morton's book Teaching Arithmetic.

References:

1. Stone - How to Teach Primary Numbers Chapt. V.
2. Hockett Jacobsen - Modern Practices in the Elementary School.
3. Morton - Teaching of Arithmetic in the Primary Grades.
4. Bonser - The Elementary School Curriculum.
5. Knight, Studebaker, Ruch - Standard Service Book IV. textbook.

Minimum Essentials - GRADE V

Subject Matter:

Concept of large numbers extended to millions and billions as needed through such use, in use and for use.

Hindu-Arabic Number System explained for informational use.

Roman Numerals through 500 and as needed.

Read and write fractions and United States money.

Resort to graphic and pictorial devices to give large numbers real content.

Mastery of basic addition and subtraction facts diagnosed and checked.

Addition - 400

Subtraction - 100

Longer columns, both regular and irregular, to types useful for social utility on grade level.

Maintain and refine addition and subtraction facility. Zero difficulty.

Increase checking consciousness and ability in problems and processes. Develop arithmetical language necessary for addition and subtraction purposes. Change within limits needed for grades.

Subtract with borrowing.

Concept of multiplication - Latin word "multus" (meaning "many"). Short cut to addition.

Mastery of basic multiplication and division facts. Enlarge multiplication to types for social

utility, refine abilities, concepts and uses.  
Zero difficulty.

Short cuts of multiplication by 10, 100, and 1000.  
Extend long division process using two and three-  
digit divisors in graded steps of difficulty.  
(Diagnostic and Remedial Teaching in Arithmetic -  
Bruecknor, p 154.)

Short division as mental process.  
Prevent error in learning procedure, diagnose and  
apply remedial work where needed.

Continued enlargement of environmental contacts of  
previous grades. Extend through use, the concept  
of units of length, liquid and dry measure, time,  
weight, and money in social utility situations.  
Develop a sense appeal graphically before manipu-  
lation.

Develop graphically, concept through comparison.  
Example: 6 inches is what part of 12 inches, etc.  
Study rectangle, square, triangle. Find perimeter,  
graphically.  
Concept of area through geography.  
Square mile developed.

Develop fraction concept before introducing manipu-  
lation of fractions. Meaning of fractions  
explained. 46 Addition types - 63 Subtraction  
types.

Extend idea of fractions through  $1/12$ . Reduction  
of fractions, addition and subtraction of mixed  
numbers.

Multiplication and division of easy steps as needed  
in social utility.

Division of fractions introduced in work for social  
utility, through problem solving. Develop con-  
cept for multiplication and division through use.  
Measurements in fractions 2 ft. 3 in. etc.

Using money numbers in the four fundamental opera-  
tions. Concept of two-place decimal. Ex.

$$\frac{\$25}{100} = \$.25 \text{ or } \$1/4$$

Introduce decimal concept through measurement.  
Price of gasoline recorded 19.8 cents. Develop  
meaning.

Read and construct simple graphs.

Bar graph

Scale drawings continued in meaningful experiences.

Scale  $1/4$  inch - 1 foot.

$1/8$  inch - 1 foot.

Problem solving - (1) Sensing situation (2) Appraising the facts (3) Seeing relations (4) Estimating (5) Working and checking (6) Testing - measure quality of performance as well as acquired facts.

Two-step problems.

Minimum Essentials - GRADE VI

The Subject Matter:

Maintain and extend all phases of number concept. Read and write numbers through billions in correlation with meaningful experiences. Develop ability to approximate numbers. Extend concept of Roman Numerals.

Increase difficulty of addition and subtraction facts.

Diagnose individual difficulties and remedy where prevention of error failed.

Presentation and mastery of division concepts. All types.

Continued widening of contacts and concepts. Use of denominate measures in practical situations. Extend use of measure.

Develop concept of area through study of rectangles and squares.

Recognize essential characteristics of common geometric figures, perimeter, area, and volume. Concrete problems.

Enlarge and apply fractional concept in addition and subtraction from fifth grade. Introduce multiplication and division of fractions after developed concept. Seventy multiplication types, eighty division types. Complete all practical operations of fractions, and reteach mixed numbers in problems. Relate fraction to decimal in common cases.

Develop concept of percent. Apply to use in daily life. Reading and writing of decimals. Four processes with decimals. Add regular and irregular decimals. Zero difficulty. Change common fractions to decimals, decimals to common fractions. Mastery of decimal point in division.

Read and construct graphs - bar, line, and circle graphs. (computation information). Scale drawings.

Problem solving.

Minimum Essentials - GRADE VII

Subject Matter:

Maintain, enlarge and develop concepts of whole numbers, fractions, decimals and percent. Social application of large numbers based on meaningful concept through social studies and content subject.

Applying the reading and writing of Roman Numerals. Use of large numbers and approximating results. Mastery of four fundamental operations with integers and with common and decimal fractions. Encouraging further practice and problem-solving. Special treatment of trouble skills. Self-testing and drills.

Progressive increase in pupils' understanding of nature of fundamental operations and power to apply them to new and more difficult situations.

Increasing facility in checking.

Algebra - Development of concept and practical applications. Study of formulas, geometry and geometric designs.

Maintaining and extending all operations involving measure--parallelograms, triangles, circles and trapezoids.

Units of cubic measure. Use of ruler and protractor and compass in construction. Develop concepts, principles, and formulas for measuring area and perimeter.

Review and extend concepts of common fractions, decimal fractions, and percent as a single psychological unit.

Maintain and refine abilities previously learned.

Seven chief skills in working with percent:  
changing percent to decimal, changing decimals

to percents, changing percents to common fractions, changing common fractions to percents, finding percent of a number, finding percent one number of another, finding the whole when a part is given.

Read and construct graphs. Bar, line, and circle graphs. Scale drawings developed.

Test to discover difficulty and diagnose for difficulty. Reteach for understanding and check for mastery.

Improve skills in problem-solving through further drill.

#### Minimum Essentials - GRADE VIII

##### Subject Matter:

Enlarge and maintain all number concepts and abilities developed in previous grades. Advanced application.

Special diagnosis and remedial procedures. Self-testing drills. Checking ability refined.

Extend principles of measurement of areas to irregular figures. Study geometric relationship, equations, formulas, positive and negative numbers, ratio, proportion and square root.

Application of fraction, decimal, and percentage. (particularly in aliquot parts.)

Continue to expand decimal concepts of decimals and percentage. Diagnose and remedy all difficult points in decimals. Social application of percentage in business and everyday life.

Bar, line, circle graphs of function maintained, developed and refined. Scale drawings.

Continue procedure of preceding grades. Problem solving, written and oral, to meet his needs.

CHAPTER VI

SUGGESTED DAILY PROGRAMS



## CHAPTER VI

### SUGGESTED DAILY PROGRAMS

#### Introduction

"The ideal of adapting the school program to the needs and abilities of the children has become almost universal. In the typical school of a few years ago, the administration set up a standard curriculum and expected the child to conform; in the progressive school of today, such as exemplified by the suggested Lockwood Central School, the child is considered the standard and the school will attempt to build a curriculum which conforms to his requirements." 1

In reviewing the course of study adopted by the Lockwood Central School, one will observe that it is a general curriculum suited, with only slight individual modifications to the requirements of the large central group with some individual programs of study for those pupils whose capacities vary widely from the capacities of the central group.

It is with these principles of curriculum study that the Course of Study submitted has been adopted by the new Lockwood Central School.

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1. Appraising the Elementary School Program, 11th Yearbook, Chap. XIV p 323

# Daily Program Gr. I & II

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00-9:15	Opening Exercises - Health Inspection,				
9:15-9:30	Gr. I Rdy. Readiness (T) Gr. II Seatwork "Activity Book"	→	→	→	→
9:30-9:45	Gr. I Color Work Gr. II Reading (T)	Books + Games	Books + Games	Books + Games	Books + Games
9:45-9:50	Bathroom - Gr. I & II	→	→	→	→
9:50-10:00	Gr. I Writing (T) Sentence + Picture	→	MUSIC	→	→
10:00-10:05	Gr. II matching	→	→	→	→
10:05-10:15	Phys. TRAINING	→	→	→	MUSIC
10:15-10:30	Gr. I Phonics Gr. II Arithmetics	→	→	→	→
10:15-10:30	Gr. I Picture word Assoc. Gr. II Phonics (T)	→	→	→	→
10:30-10:45	RECESS	→	→	→	→
10:45-11:00	Gr. I Activity DRAMATICS STORY OR NURSERY RHYMES Gr. II Build Family words	→	→	→	→
11:00-11:15	Gr. I Reading Readiness (T) Gr. II Silent Rdy Seatwork	→	Library	→	→
11:15-11:30	STORY	→	→	→	→
11:30	DISMISSAL	→	→	→	→
1:00-1:15	Gr. I Color Recognition (T) Gr. II Spelling	MUSIC OR ART } WITH SUPERVISOR	→	→	→
1:15-1:30	Gr. I Use Colors Gr. II Writing	→	→	→	→
1:30-1:45	Gr. I & II Health	→	→	→	→
1:45-2:00	Clean desks + get ready for dismissal	→	→	→	→
2:00	DISMISSAL	→	→	→	→

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# Daily Program Gr. III IV V

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00-9:15	Opening Exercises				
9:15-9:30	Gr. 3 ARITH (T) " 4 " WORK BY THEMSELVES " 5 " " " " "	→	→	→	→
9:30-9:45	Gr. 3 ARITH. WR. WORK " 4 " (T) " 5 CONTINUE ARITH. WR. WR.	→	MUSIC	→	→
9:45-9:50	PHYSICAL TRAINING	→	→	→	→
9:50-10:00	Gr. 3-ENG. Assign. " 4 " " " 5 ARITH (T)	→	→	→	→
10:00-10:15	Gr. 3 ENG. (T) " 4 HISTORY ASS. " 5 " "	→	→	Gr. 4 Geog Gr. 5 " "	Gr. 4 - Geog Gr. 5 " "
10:15-10:30	RECESS	→	→	→	→
10:30-10:45	Gr. 3 Read + do " 4 ENGLISH (T) " 5 Science Assign	→	Gr. 3 Civic Ass. " 4 ENG. " 5 Civic Ass.	→	→
10:45-11:00	Gr. 3 Written Work " 4 Science Ass " 5 ENGLISH (T)	→	Gr. 4 Civic Ass.	→	→
11:00-11:15	Gr. 3 READING Gr. 4, 5 - (Time for corrections for Reading)	→	→	→	→
11:15-11:30	Gr. 3, 4, 5 Penmanship	→	Gr. 3 Health " 4 " Assign " 5 " Assign.	Gr. 3 Health " 4 " Assign. " 5 " Assign.	→
11:30-11:45	Gr. 3 - Free Time - Connections " 4 Rdy (T) " 5 Supplementary Rdy.	→	Gr. 3 Wr. work " 4 " " " 5 Health (T)	→	TOPICS OR ORAL REPORTS 11:30-12:00 Books
11:45-12:00	Gr. 3 Build Family words Gr. 4 Assign. From Reading Gr. 5 Science (T) DISMISSAL	→	→	→	→
12:00-12:15	Gr. 3 Spelling " 4 " " " 5 HISTORY (T)	→	→	→	→
12:15-12:30	Gr. 3 Assign. " 4 HISTORY (T) " 5 Assign.	MUSIC OR ART } SUPERVISOR	Gr. 5 Geog. (T)	→	→
12:30-12:45	Gr. 3 Reading Science (T) " 4 Suppl. Rdy. " 5 " "	→	→	→	→
12:45-1:00	Gr. 3 Sc. Assign. " 4 Science (T) " 5 Suppl. Rdy.	→	→	→	→
1:00-1:15	RECESS	→	→	→	→
1:15-1:30	Gr. 3, 4, 5 Story Telling	Gr. 3 Reading Sc " 4 Suppl. Rdy " 5 HISTORY (T)	→	→	→
1:30-1:45	Gr. 3, 4, 5 ART	→	→	→	→
1:45-2:00	Gr. 3, 4, 5 ART	→	→	→	→
2:00-2:15	DISMISSAL	→	→	→	→
2:15-2:30		Gr. 3 Reading Sc " 4 Suppl. Rdy " 5 HISTORY (T)	Poetry	→	→
2:30-2:45		→	Gr. 5 Civics	→	→
2:45-3:00		APPRECIATION, POEM PICTURE	Gr. 3 ACTIVITY Gr. 4 HEALTH (T) Gr. 5 ACTIVITY	→	→
3:00				STORY TELLING DRAMATIZATION OR LIBRARY	Gym }

# Daily Program Gr. VI, VII, VIII

TIME	MONDAY	TUESDAY	Wednesday	THURSDAY	FRIDAY
9:00-9:15	Opening Exercises	Health Inspection	→	→	→
9:15-9:30	Gr. 6 Arith (T) "7 " Assign	→	→	→	→
9:30-9:45	Gr. 6 Arith Assign. "7 " Assign. "8 ENG. Assign.	→	→	→	→
9:45-10:00	Physical Training	→	→	→	→
10:00-10:15	Gr. 6 ENG. Assign. "7 Arith (T)	→	Gr. 7 Geog. Assign	Gr. 7 Geog. Assign	Gr. 7 Geog. Assign
10:15-10:30	Gr. 6 ENG. (T) "7 History Assign "8 Assign from Arith class	→	→	→	→
10:30-10:45	Recess	→	Gr. 6 Geog Assign	Gr. 6 Geog. Assign	Gr. 6 Geog. Ass.
10:45-11:00	Gr. 6 History Assign "7 ENG. (T) "8 History Assign	→	→	→	→
11:00-11:15	Gr. 6-7 Do Connections "8 Eng (T)	→	MUSIC	Gr. 6 Health Assign Gr. 7-8 Assignments (H)	→
11:15-11:30	Gr. 6 Rdy (T) "7 Library "8 Do connections	→	Gr. 6 Health (T) 7-8 - Assign (H)	Gr. 6 Assign. (H) 7-8 Health (T)	→
11:30-11:45	Gr. 6 Penmanship	→	Gr. 6 Assign (H) 7-8 Health (T)	→	11:30 } Gym
11:45-12:00	Gr. 6 Assign from Rdy. "7 Rdy "8 Library	→	Appreciation Lesson	11:30 } Topics 12:00 } Current Events	12:00 } Gym
12:00	DISMISSAL	→	→	→	→
1:00-1:15	Gr. 6 Spelling "7 History (T) "8 History (T)	→	Gr. 6 Lit. Assign.	Gr. 6 Lit. Assign. "7 Geog. (T)	→
1:15-1:30	Gr. 6 Science Assign "7 History (T) "8 Spelling	→	Gr. 6 Geog. (T)	Gr. 6 Geog. (T) "7 Lit. Assign.	→
1:30-1:45	Gr. 6 History (T) "7 Science Assign.	→	Gr. 6 Geog. (T)	Gr. 7 Lit. Study	→
1:45-2:00	Gr. 6 Supplementary Rdy. "7 Science (T) "8 Sp/No. Rdy.	Art or Music } Supervised	Gr. 6-8 Lit. Assign.	Gr. 6 Lit. (T) "7 Geog. Ass. "8 " "	→
2:00-2:15	Gr. 6 } Recess	→	→	→	→
2:15-2:30	Gr. 6 Science (T) "7 Hist. Assign. "8 " "	→	Gr. 6 Lit (T) "7 Geog. Assign. "8 " "	Appreciation Lesson or Picture Study	→
2:30-2:45	Gr. 6 " " Free Time "7 Science (T)	→	Gr. 7-8 Lit. (T)	→	→
2:45-3:00	Gr. 6-8 MUSIC	→	→	→	→
3:00	DISMISSAL	→	→	→	Book Reports Story Telling Project Club

CHAPTER VII

THE STAFF

## CHAPTER VII

### THE STAFF

The staff should consist of three teachers (one serving in the capacity of principal) and a janitor.

The teachers should be selected with certain general standards in mind based upon the following characteristics:<sup>1</sup>

1. The ability to secure good habits and orderly room atmosphere.
2. Teaching technique.
3. Businesslike efficiency.
4. Emotional balance.
5. Power to encourage, stimulate, and inspire children's interest.
6. Forcefulness.
7. Ability to control children without repression or domination.
8. Ability to control children without emotion and sentimentality.
9. Dependability.
10. Understanding of children.
11. Imagination.
12. Respect for children's personality and intelligence.
13. Ability to recognize causes back of behavior.
14. Judgment and common sense.
15. Possibility of growth.
16. Genuine interest in work.

17. Intelligence, integrity, cooperativeness.
18. Good health, open-mindedness, good disposition, adaptability, loyalty.
19. Consistency in handling a group.
20. High ideals, thoroughness, resourcefulness, initiative, sense of humor.
21. Broad vision, good taste.
22. Maturity - emotional and mental.

The Janitor - In selecting a janitor the following qualifications should be kept in mind:<sup>1</sup>

1. He should have a fair school education.
2. He should have good health and be free from physical defects such as sight, hearing or any defect which might interfere with his work.
3. He should be honest, reliable, cooperative, and even-tempered.
4. He should take pride in his work. He should be orderly, neat and have system in his work.
5. He should have the ability to deal amicably with children, teachers, school board and public.
6. He should abstain from the use of intoxicants and profane language.
7. He should have some skill as a carpenter, electrician, plumber, etc.
8. He should be a desirable citizen in the community, preferably a taxpayer and married with children attending the school.
9. He should serve a probationary period of a year at least, before he is elected to a permanent appointment.

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1. The Nation's Schools, Janitor and Storage, p 38, Vol. XXXIII No. 6, June 1944.

CHAPTER VIII

EXTRACURRICULAR ACTIVITIES



## CHAPTER VIII

### EXTRACURRICULAR ACTIVITIES

Playground - Schools that are constructed in the present day have as an indispensable item, a playground and play facilities to aid in the development of a better balanced individual.

Following are suggestions which should enable the teacher to supervise that playground activity which would be most beneficial to the pupils of Lockwood School:

The playground shall be large enough so as to give the pupils ample space for play and for physical training.

Each teacher shall see to it that her pupils have a certain amount of supervised play.

A Neilson Van Hagen book will be on reference in the library to aid the teachers in adequately supervising physical training and play classes.

A list of various games for the grades from one through eight would help as a practical suggestion and stimulate interest among the teachers to produce a varied program.

The playground is well drained and gets full benefit of the sunlight. It is not exposed directly to the north. There is a special place for both boys and girls to participate in unsupervised play. At times, when supervised, they may play various games together.

Sand bins are available for the smaller children. A concrete walk is placed so that in muddy seasons the smaller children will have a place that is clean and dry on which to play. Also on extremely cold days this place can be cleaned and be available to the children. There are slides and horizontal bars which are good and quite safe for the children.

This spacious playground could be used by the community at various designated times (so as not to conflict with school) for a general

gathering place, a place for athletic meets, band concerts, community sings, outdoor movies and so forth.<sup>1</sup>

The school property would be fenced in with a strong, close-mesh, woven wire fence. Ivy, roses, or honeysuckle vines could be planted along the fence thereby enhancing the appearance of the grounds. Shrubbery and trees too, would improve the landscape.

An arrangement for planting would be made and followed over a period of years, if necessary, for scattered planting does not look well. Every tree is to be carefully selected from a nursery or forest and planted alone because of the space it occupies and for special requirements of shade. Trees may be planted along property lines.

Grass seed mixtures adapted to given soil and climate will produce fine lawns if well cared for. Kentucky blue grass is good for this locality.

In the construction of walks and roads, the sub-grade is to be well compacted of uniform grade and cross section, and have good drainage. The sub-base should be of coarse materials, well compacted. The top should be crowned, the amount depending upon the material and longitudinal grade. Walks and drives are expensive and detract from the appearance of the grounds, hence should be no wider than necessary. A suitable width of the walk is 6 feet. The width of the road so that two vehicles can pass should be about 14 feet.

The following pages contain suggestions for playground games as well as dances for the elementary grades:

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1. The Nation's Schools, Vol. XXXIII, No. 1, (Jan. 1944)

Lesson Plan - Sub., First and Second  
Week of September 4

Rhythms-

Walking  
Skipping  
Running

Crossing the Brook-

Two lines are marked off about one foot apart to represent the brook. Each child runs and tries to jump across the brook. The next time wider brooks are marked. After all have tried the running jump several times, a standing jump may be attempted.

Week of September 11

Review Marching

Story Play-Playground

1. Running to the playground.
2. Jumping Rope--imaginary rope, swing arms and jump several times.
3. See Saw--feet astride, arms sideward. Bend body to right and left, raising first left leg then right.
4. Pushing the Swing--hold hands in position of pushing, right foot forward. Push forward swaying body forward and backward.
5. Playing Ball--all throw; all catch; throw high and low; catcher reach or jump high or stoop low.
6. Blow Whistle--inhale, then exhale with whistle.

Mimetic or stunt-

Rabbit Hop--Squatting position with thumbs held at ears, fingers extended upward. Hop forward on both feet, imitating hop of the rabbit.

Game--Squirrel in the Trees

Two-thirds of the players stand in couples with hands joined, forming hollow trees. The trees are scattered about in no set formation, with considerable space between them. Place inside each tree one of the remaining players, representing squirrels. There should be, in addition, one

(or more) odd squirrel who is without a tree. The teacher or leader claps his hands or blows a whistle, and all the squirrels must run to other trees and not return to the tree just left. The odd squirrel tries to secure a tree. The one left without a tree becomes the odd squirrel.

Lesson Plan-Sub., First and Second  
Week of September 18

Review-Galloping

Story Play--A Day in the Country

1. Run to trolley car--run in place.
2. Play conductor--stop and start car...collect fares...etc.
3. Get off car and walk to farm--walk around the circle.
4. Change to play clothes--pull on overalls.
5. Run to barn to gather eggs--running about hunting for eggs.
6. Pick berries--stoop for berries and reach to basket.
7. Pick apples--stoop for apples and reach to basket.
8. Go swimming--use arm motions of swimming crawl.
9. Skip stones over the pond--throw with sidearm underhand motion.
10. Jump fence on way home--jump over seat.
11. Tired--sit down and rest and relax.

Stunt or Mimetic-

Duck walk--Sit down on heels, place hands on knees. Waddle slowly forward. After some practice, classes may try running in this position.

Magic Carpet-

Draw one or more squares on the floor around the outside of the room. Children may or may not hold hands in circle around the room. Children march or skip around; at a signal (stopping music, clapping hands, or soft whistle) all stop. Those caught on any of the carpets must sit down. Continue until all but one are eliminated.

Week of September 25

Review--Hopping

Story Play--Cutting Grass

1. Running lawn mower--Walk around pushing lawn mower with both hands and making "Brr-rr" to imitate sound.
2. Raking Grass--Face front of room. Reach forward and to either side with long strokes. Rake grass into piles.
3. Gathering grass--Pick up big armfuls and put into wheel barrow.
4. Dumping Grass--Run with wheel barrow to large pile of grass.
5. Emptying wheel barrow--Take out large armfuls and throw onto big pile.

Stunt or Mimetic--Roosters

With arms bent, raise elbows sideways, rise on toes, and move head backward and Cock-a-doodle-do. Lower arms and heels.

Skip Tag

All players form a circle and one is IT. The odd one skips around on the outside of the circle and tags another player. The one tagged skips after the tagger, trying to catch him. If he is caught, he must be IT again, but if he reaches the vacant place first, he is safe and the other player becomes IT and skips around the circle and tags someone else.

Lesson Plan - Sub., First and Second  
Week of October 2

Oats, Peas Beans--(Physical Education for Elementary Schools by Neilson and Van Hagen on Page 102.)

Oats, peas beans and barley grow,  
Oats, peas beans and barley grow,  
Do you or I or anyone know  
How oats, peas beans and barley grow?

Thus the farmer sows his seed,  
Thus he stands and takes his ease,  
Stamps his foot and claps his hands,  
And turns around to view his lands.

Awaiting for a partner,  
Awaiting for a partner,

Open the ring and choose one in,  
While we all gaily dance and sing.

### Story Play--Brownies

1. Brownies come out at sunset-Creep out of their seats which are their houses in the trunks of the trees.
2. Exercise their legs which are cramped from inactivity.
3. Creep quietly into the woods to see if anyone is near. When they hear anyone coming they stop quickly.
4. Peep into windows of an old hut. Stretch tall.
5. See house in disorder. Brownies decide to help. Sweep floor. Wash soiled clothes. Hang them up to dry. Wash windows, etc...
6. Day breaks. Brownies skip home to trunks of trees.

### Stunt or Mimetic-

Galloping Horses--Right or left foot forward leading all the way, with knee of leading foot high gallop around in circle.

Game - Teasing Pussie--Circle with pussie in the center.

### Cat and Mice--

One player is chosen to be cat and hides behind or under teacher's desk. After cat is hidden, the teacher beckons to five or six other players who creep softly up to the desk and when all assemble, scratch on it with their fingers to represent the nibbling of mice. As soon as the cat hears that, she scrambles out from the desk and gives chase to the mice who may save themselves by getting back to their holes (seats). If a mouse is caught, the cat changes places with him for the next round of the game. If no mouse is caught, the same cat continues, or the teacher may choose another at her discretion.

A different set of mice should be chosen each time so as to give all of the players an opportunity to join in the game. The children may give the cat quite a chase before returning to their seats instead of seeking safety in the shortest and most direct way.

Lesson Plan - Sub., First and Second  
Week of October 9

Review of Oats, Peas, Bean.

Story Play--Autumn in the Woods-

1. Skip to the woods.
2. Climb into trees and look into bird's nests.  
Reach high with alternate arm and foot.
3. All run and jump over brook-Jump imaginary brook.
4. Throw stones into brook-Stoop and secure stones, throw and jump back from splash.
5. Shake tree branches to see leaves fall.
6. Walk, rustling the leaves.
7. Gather leaves and toss into pile.
8. Run and jump into pile of leaves.
9. Run home.

Mimetic or stunt-

Elephant walk-Bend trunk forward at the waist. Let arms down to represent the trunk. Walk in long, slow strides, swinging trunk from side to side. Reach out and up with trunk.

Game - Review any game that the children would like to play again.

Week of October 16

Hickory, Dickory Dock - Singing Game.

Hickory	Arms curved overhead, bend body to right
Dickory	Bend body to left
Dock	Place hands on hips
Tick tock	Two little taps with feet
The Mouse ran up the	Little running steps on toes toward front of room. On word <u>clock</u> bend forward as if listening to clock. Hold hand farthest from clock cupped in back of ear in order to hear ticking more plainly.
The clock struck one..	Clap hands once for one
The Mouse ran down....	Turn and face back of room. Light quick running steps back and face front again at own seat.
Hickory, dickory dock,	Same as for line 1.

Tick Tock....	Two taps with feet. Hands on hips.
Hickory	Hands on hips. Jump in place on both feet making a quarter turn right.
Dickory	Jump in place again making a quarter turn right
Tick tock	Two taps with feet, at same time turning to face front of room.
The mouse ran up the clock	As for part one
The clock struck one..	As for part one
The mouse ran down	As for part one
Hickory	Jump in place making a quarter turn right
Dickory	Jump in place making another quarter turn right
Dock	Jump in place making another quarter turn right.
Tick Tock	Two taps with feet, at same time turning to face front of room.

### Story Play - Nutting

1. Run to woods, carrying over shoulder a bag in which to put nuts.
2. Climb over - Climb over seats.
3. Walk through carpet of leaves - Lift knees high.
4. Jump over a little brook as nut trees are on other side.
5. Reach up and shake branch, standing on tiptoes.
6. Throw things at tree to make nuts drop.
7. Stop and bend to pick them up and put them in bag.
8. Lift the bag up, throw it over shoulder and walk home.

### Mimetic -

High Stepping Horses - Bring knees up in front.

### Game - Under the Bridge

Two thirds of the players form a large double circle, couples each, both hands joined high to form arches. Each remaining player stands under an arch, facing the line of direction. One or more extra players join this line. At a signal the players under the arches march around the circle. When a signal is given to stop, each (moving) player tries to get under the nearest



arch or bridge. Any one left out tries to secure an arch the next time. Can be played with running, skipping, hopping, galloping or turning the opposite direction.

Lesson Plan - Sub., First and Second  
Week of October 23

Review - Hickory Dickory Dock

Story Play - Jack O'Lantern

1. Children skip to field for pumpkins.
2. Jump over stone wall to where pumpkins are-Jump seats.
3. Stoop and lift very heavy pumpkins to wall one at a time.
4. Jump back over stone wall.
5. Lift pumpkins from wall and place in cart.
6. Run home dragging cart.
7. Make Jack O'Lantern-Cut off top, dig out seeds and throw them away. Make eyes, nose and mouth.
8. Run with Jack O'Lantern-to scare people. Reach up high to windows. Hear some one coming so stoop suddenly. Repeat. Try another window farther down street. Window high, can barely reach it.
9. Run home.
10. Tired of running. A good stretch.

Stunt or Mimetic-

Frog Hop-Feet apart and knees bent deeply.  
Short hops forward imitating frog.  
Place hands on knees, elbows out.

What to Play (Tune - Mulberry Bush)

In school room stand beside chairs; out of doors form circle. Teacher calls one child to front to be leader. As the child is coming forward the class sings-

Mary (use child's name) show us what to play,  
What to play, What to play, Mary  
Show us what to play. What to play today.

When the class stops singing, the leader who is facing the class sings-

"This is the way I'm going to play  
Going to play, going to play,  
This is the way I'm going to play  
So play this way today."

While singing this verse the leader makes some motion with her arms, legs, trunk, etc.. as chopping, rowing, marking time, jumping or any exercise used in previous lessons. The class then imitates her actions and at the same time sings-

This is the way we're going to play,  
Going to play, going to play,  
This is the way we're going to play,  
So play this way today.

Lesson Plan - Sub., First and Second  
Week of October 30

Singing Game - London Town (Tune-Pop Goes the Weasel)

Circle formation. The teacher chooses one child to be the leader. As the child goes to the middle of the circle the rest sing-

I want to go to London Town  
How shall I get there?

The class stops singing; the leader sings-

I'll go the way the elephant goes  
That's how I'll get there.

While singing these two lines the leader imitates some animal. Then the whole class sings the song from the beginning, imitating the animal chosen. Begin with slow moving animals, gradually choosing faster moving animals, gradually the fastest methods of travel are reached-the train or airplane, the fastest of all, singing-

We'll surely get there.

Suggestions-Bull frog, farm horse, rabbit, turkey, birds, etc.

Story Play - Indians

1. Paddle in canoe to woods-Kneel on left knee, move arms from front to rear on left side.
2. Walk through woods-With one hand shielding eyes, look all around among shrubs as if scouting.
3. Shoot a bear-Kneel on one knee, stretch arms and aim bow and arrow. Draw one arm back. Make soft, hissing noise as arrow goes through air.
4. Run four or five steps forward to bear.
5. Stoop and pick bear up. Throw bear over shoulder.
6. Walk back to canoe. Paddle home.

Stunt or Mimetic

Chicken walk-Lean forward, clasping hands under knees.  
Bend knees slightly. Move forward in this position.

Game - Dog and Bone

The dog sits with hands over eyes on a chair or bench in front of the room, his back toward the other players and his bone (eraser or any small object) under the chair. A child, chosen by the teacher, attempts to sneak up on the dog and touch the bone without being heard. If the dog hears him coming he may turn to see him and the player returns to his seat. The object of the game is to touch the bone without being heard by the dog. The child who is successful takes the place of the dog. Dog should be warned not to turn unless he is sure that he hears someone coming. He must forfeit his place if he turns and no one has left his seat. The teacher indicates who is to go by pointing to the child. The game may be made into a tag game by having the dog tag the person attempting to touch his bone. That child is safe only by touching the bone before being tagged by the dog or by reaching his own seat. This puts the penalty rather than the premium on being the dog.

Lesson Plan - Sub., First and Second  
Week of November 6

Review of singing game "London Town"

Story Play--Pilgrims

1. Cabins must be built--winter time and snow on ground--run to the woods dragging sled. Hands behind as if holding rope.
2. Chop down and trim tree--one foot forward, swing ax over opposite shoulder, then chop, stooping over as you do so.
3. Lift logs on sled--every other child faces back of room and both stoop together. Pick up logs and drag on sled at side.
4. Drag sled home--hands behind back drag sled home.
5. Want fire to cook, must saw wood before starting to build fire--every other one faces partner. One child puts right foot forward and holds arms forward. The one facing him puts left foot forward and bends arms. As first child pulls arms inward and sways back the one facing him stretches arms forward and sways forward.
6. Builds walls of cabin--use hammer, pegs and saw.

7. Run to swamp and get reeds for roof.
8. Use sickle and cut reeds--Take a stride position. Twist body to right, then stoop low and swing body to the extreme left. Stand erect and repeat movement.
9. Arms full of reeds, run back and put reeds on roof.
10. Dig post holes for fence--One foot on spade, hands on handle, push down. Stoop, strain and toss dirt over shoulder.
11. Setting in posts--Take post, lift high with both hands, and bring down. Stamp in dirt. Repeat.

### Stunt or mimetic-

Bell ringing--Separate the feet and at the same time extend the arms diagonally forward and upward with hands closed as if taking hold of a rope. Keeping the back erect and the heels tight on the floor, bend and separate the knees and pull the arms down in front bending the elbows. Return to starting position. Ding, dong as bell rings.

Play any game you would like to that we have played this year as a review game.

### Lesson Plan - Sub., First and Second Week of November 13

#### Singing Game--Indians

#### Actions

Come let's play we're Indians

Walk around in a circle, taking a step on each underlined word.

Way out in the We-est.

Continue walking. On the words WAY OUT raise right arm sideward, showing direction west. Continue walking. Pat own chest on words I CHIEF BRAVER REST. Face center and kneel on right knee.

I will be the chief be-cause  
I'm braver than the re-est.  
Let's get a bow and arrow.

Hold bow and arrow, reaching forward with left arm, bending right arm at right shoulder. Shoot arrow (snap fingers of right hand) on word hunting. Stand and

And go hunting every day

With the Indi-ans

That live across the way.

face around in line of direction on word day.  
Bending forward and bending arms at sides, picking foot well up in back, run around--taking one step on each underlined word.

O-o-oh.

Back of hand in front of mouth while saying O-o-oh.

### Story Play-Thanksgiving

1. Run to the woods and hunt for turkeys.
2. Carry turkey home--high stepping so as not to fall over logs.
3. Hang turkey up high and pick feathers--Stand on tiptoe to reach.
4. Roll pie crust, stoop to put pie in oven.
5. Set table for dinner. Shake the cloth before placing on table. Reach in cupboard for dishes, glasses, etc...
6. Run out to play while dinner is cooking--Make a circle. Play a game.
7. Play with the leaves--Stoop gathering leaves. Stand and throw leaves over head. Repeat several times.
8. Return to house--Run to seats.

### Mimetic or stunt-

Cats--Bend over with hands on floor on all fours. Move forward slowly and quietly saying meow, meow.

### Game-Hide the Eraser-

One row at a time plays this game. One row goes out in the hall or the coat room and while that row is out the instructor picks someone to hide the eraser. At the word the children outside enter and try to see how quickly they can find the eraser and then go and sit down. When the eraser is found it is not touched or pointed to or not a word is spoken. The idea is for the instructor to time the pupils row by row and see which row is the fastest. This timing can be done with the second hand of a wrist watch and the results tabulated on the board so all may see how the game is progressing.

Lesson Plan - Sub., First and Second  
Week of November 20

Review of Singing Game "Indians"

Story Play--How Animals Get Ready for Winter

1. Squirrels gather nuts and bury them--jump on toes, get nuts, put in mouth, stoop down, dig hole, put in ground.
2. Birds fly south--with arms shoulder high, fly about.
3. Bear looks for cave--walk around, swaying from side to side. Find and crawl into own cave (seat).
4. Deer in north woods make tracks in snow--run, making a zig-zag trail.
5. Pony is shod--hammer shoes. Every other child is pony and blacksmith.
6. Pony breaks loose and runs away--gallop around free area.
7. Snake wiggles slowly into hole--glide toward a hole and wiggle into it.

Stunt or mimetic--Bears

On all fours move forward slowly swaying from side to side. Rise up on hind legs and sway from side to side walking.

Game--Jack-in-the-box and also Hide the Eraser

The children stand beside their seats. The teacher or pupil selected by the teacher, acts as leader. The leader says "Jack-in-the-box". All should quickly bend knees deeply. When the leader says "Jack-out-of-the-box" all should stand quickly. The leader should do at the time the opposite of what he tells the class to do. If anyone imitates his action instead of doing what he says to do, that one must sit down. Any child not immediately performing the action suggested must sit and is out of the game. The one who stays in longest wins.

Lesson Plan - Sub., First and Second  
Week of November 27

Review any singing games that you would like to.

Story Play--Snow Play

A big snowstorm has left drifts in all the yards. Let's go outdoors and walk through them. (The rows run around one by one with high knee-raising.)

1. Get the shovel and clear the walks. Hold shovel with both hands and a little on your right side. (1) Dig down. (2) Empty snow over your left shoulder. (3) Swing shovel to right side.
2. Sweep off steps--(Sweeping--trunk twisting)
3. Make a snowman by rolling big snow balls and piling them up. (Forward downward bending of the trunk, pushing motion)
4. Throw snowballs at snowman and knock him over. (One child is snowman; he stands with arms outstretched) (As children throw, he drops arm or ducks head to show that they have been hit. Finally falls down.)
5. Run home through the snow drifts. Children run around their rows.
6. Show how snow falls and wind blows. (Arms overhead, then slowly lower them sideward and downward with fluttering motion of fingers.)

### Stunt or Mimetic - Snowballing

Deep knee bending to pick up snow. Rise and press snow into a ball. Move the right foot back, raise right arm to a position for throwing and throw with force. Repeat several times with each arm.

### Game - Who Has Gone?

All are in their seats (or in a circle) with the one who is IT closing his eyes or looking the other way or going into the coat room while the instructor indicates which child shall leave the room. After he has gone, IT opens his eyes and guesses who has gone. If he names the child correctly, that child is IT the next time. If he fails to name he closes his eyes; the child returns and opening his eyes he guesses who has returned. If he fails he must be IT again.

### Lesson Plan - Sub., First and Second Week of December 4

### Singing Game - Here We Go Round the Xmas Tree

Tune - Here We Go Round the Mulbery Bush

<u>Words</u>	<u>Actions</u>
Here we go round the Christmas tree, Christmas tree, Christmas tree,	Skip around an imaginary Christmas tree

Here we go round the Christmas tree,  
So early Christmas morning.

What do you wish that Santa would bring,	Walk into center toward tree
Santa would bring, Santa would bring, etc....etc...etc.	Walk back from center Repeat

(In the remaining stanzas, suit the action to the words)

I should like a big red drum, etc....  
I should like a doll to rock, etc....  
I should like a top to spin, etc....  
I should like a rocking horse, etc...  
I should like a jack-in-the-box, etc..

(All these verses need not be used. They are given as suggestions. New stanzas may be added according to the suggestions of the pupils.)

### Story Play - Getting the Christmas Tree

1. Put on hats and coats.
2. Run to woods with axes and saws and sled--Run around room.
3. Blow snow off coat.
4. Getting warmed up. Jump with feet apart and arms sideward. Jump with feet together and arms across chest. (continue)
5. Chop down tree. Feet apart, swing axe over right shoulder; chop bending forward and downward; chop on both sides.
6. Place tree on sled. Drag sled home. Hands behind back.
7. Lift tree from sled and carry over shoulder to house.
8. Place tree on stand.
9. Decorate tree.
10. Skip around tree. Skip around the room.

### Stunt or Mimetic - Jack-in-the-box

Feet slightly apart. Bend knees deeply on count of one.  
On count of two spring high in air and land on toes.  
Repeat several times.

Game-Review any game that you would like to play.



Review of Singing Game - "Here We Go Round the Christmas Tree"

Review any story play.

Review any mimetics.

Review any game that you like to play.

Exercises--Set 3

1. Stand with feet apart, arms obliquely sideward and upward. Drop arms to relaxed position crossed in front of the body. At the same time, relax the knees and droop the shoulders. Count of two--fling the arms upward stretching upward. Continue in slow rhythm.
2. Feet apart and arms folded across the chest. Count of one--fling arms sideward and rise on toes. Count of two--arms back, folded on chest and lower heels. Continue in slow rhythm flinging arms back hard.
3. Jump with feet apart #1. Jump with feet together #2. Start slowly and increase speed.
4. Deep breathing.

Lesson Plan - Sub., First and Second  
Week of January 1

Singing Game - "Here We Go Round the Merry-go-round"

Here we go round the merry go round  
Merry go round, merry go round  
Here we go round the merry go round  
On a lion or a pony.

All slide sideward  
right, around circle.

This is the way we start to move  
Start to move, start to move  
This is the way we start to move  
On a lion or a pony.

Place right foot forward (toward center of circle); alternately sway the weight to right and left foot; bend arms as if holding reins.

This is the way we hurry up,  
Hurry up, hurry up,  
This is the way we hurry up,  
On a lion or a pony.

Feet the same; leap forward on right foot, raising left back; leap backward on left foot, raising right foot. Continue alternately. Sing faster.

### OTHER EXTRA CURRICULAR ACTIVITIES

The introduction of extra curricular activities should be gradual and should be dictated by the needs of the school and how rapidly it can establish proper supervision of the activities. Each activity should contribute certain social and moral values and should be supervised by the school and subject to school control.

Activities included in the school program:

1. School Paper
2. Junior Red Cross (set form to follow)
3. Hobby Club
4. Nature Club

The School Paper - Through power of suggestion and careful guidance on the teacher's part, have the pupils suggest that they edit a paper. Call a class meeting and have the president advance the idea, pointing out the advisability of having such a publication. After deciding affirmatively, get committees organized. Select children that are best suited for a particular phase of the publication. All are to be encouraged to participate in one way or another. Even the poorest students can do their part by helping to assemble the sheets as they come from the mimeograph and are ready to be stapled together.

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After the stencils are cut, some of the pupils can

take care of the mimeographing.

Contributions may be accepted from all grades and subject matter in all fields can be correlated with this idea. The cover may be designed by some outstanding art student.

Copies can be taken home by the pupils and the parents will feel proud to see their children's ideas in print. Such work will indicate to the parent the job that the teacher is doing and might, in many cases, promote cooperation between parent and teacher.

Publication may be monthly, semi-annually or whatever has been decided. Twice a year seems more practical for this school.

Nature Club - A president, vice-president and secretary may be elected. These officers to be changed every two months so as to give each child an opportunity to serve in some capacity. The president appoints committees whenever necessary. The club can hold its meeting every other week on Friday instead of a language class.

When roll is called, each pupil answers with the name of a bird, flower, tree or other object of nature as prearranged in last meeting. The children suggest a topic they would like to study with the teacher guiding the children in their selection. Reports on signs of autumn, tree leaves, birds that remain in the winter, signs of winter, etc. will prove interesting.

In the winter, cocoons of moths can be collected and kept in a secure place. When they come out in the spring, a study of the life history of moths and butterflies can be made.

Pollywogs can be caught, placed in good-sized glass jars and their development through the various stages noted. Supplementary reading about frogs can be placed at the pupil's disposal.

In spring, corn, beans or other seeds can be planted in a glass jar. They should be planted on the side close to the glass so changes in growth may be observed. This study can be correlated to the subject of Science.

Hobby Club - The membership may be voluntary and an arrangement similar to other clubs could be followed. Committees should be appointed to take care of program planning. Each pupil will have an opportunity to bring in his hobby and put it on display for his classmates and possibly the entire school. The child can tell about his collection, and it should be displayed on a table for a few days.

Depending upon the nature of the collection, a meeting can be held in place of a Science, History or English class.

This club should teach the children the value of hobbies, arouse or stimulate their inherent urge to collect things, improve upon cooperation with one another,

and correlate the activity with many other subjects.

CHAPTER 1X

FINANCE

## CHAPTER IX

### FINANCE

General Suggestions for Finance - There are two methods of financing the proposed school. These are (1) paying for construction of the school by bonds, or (2) using the proceeds of current taxes. When a school system bonds, it simply borrows money and gives its written promise, that is, its bond, that it will repay the money at a specified time and at a stipulated rate of interest.

There are two plans of bonding: (1) the serial bond plan (2) the straight bond plan.

The serial bond plan is one in which provision is made for retiring a specified portion of the total debt each year or at some other short and stated interval. The advantage of this type is that the community is obliged to pay for the bonds at specific times. Many states prohibit the use of any other type of bond by public authorities.

The straight bond plan is one in which the bond is issued for a specified number of years and all of it is redeemed at the end of that period. Interest on the bond is paid annually or at some other stated interval. This plan is not recommended because of the heavy interest charges which it entails, and the large tax rate which is required when the time comes for redeeming the bond. In cases where the school is unable to redeem the bonds



when they come due, the bonds have to be refunded; that is, resold for another specified number of years. Interest charges then often amount to two or three times as much as the principle.

The advantages of bonding are that it distributes the payment for capital outlays over several years and does not place an undue hardship on the taxpayer. It permits the taxpayer to have the use of his money rather than the public and also permits future generations to help pay for permanent improvements which they will use.

In an attempt to make the retirement of straight bonds safer, a few school systems have created a sinking fund. They have made this provision by placing a certain amount of money annually in a fund with the expectation that this fund would retire the bonds when they come due. Disadvantages of this method are (1) misuse of sinking fund moneys on the part of public officials, (2) unscientific basis employed in calculation of sinking fund requirements, (3) difficulty of instructing the public in the complex nature of the plan, (4) failure to provide proper investment of funds, (5) failure to provide proper fund and make adequate annual contributions, (6) lack of appreciation on the part of the governing bodies of the importance of sinking fund obligations--the primal security of the bond-holder.

The general procedure of financing the school is as

follows: (1) an item concerning finances of the new school is approved by the selectmen and finance committee and appears as an item in the town warrant; (2) town meeting is held and it is up for action--"Will the town vote to approve a certain amount for the new school;" (3) after it is voted in, the handling is turned over to the town treasurer. He advertises for bids, finds the lowest bidder for creation and issuing of bonds and then issues the bonds. The bonding company whose bid is accepted is empowered by the direction of the town treasurer, (4) bonds are issued in serial notes due in five years, ten years, etc. It is a regular obligation the town has to meet, (5) the assessment on the bonds is arranged so that the town is taxed for a definite sum each year for the duration of the bond. This way the same sum will pay off interest so it will come out evenly at the finish and eliminate complicated figuring yearly.

TO MY WIFE  
WHOSE AID AND ENCOURAGEMENT  
HAS MADE POSSIBLE  
THIS STUDY

Approved by Albert W. Purvis

Date May, 1947

