DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1924, No. 4

A TYPE RURAL HIGH SCHOOL

MOUNT VERNON UNION HIGH SCHOOL SKAGIT COUNTY, WASHINGTON

BY

C. A. NELSON

SUPERINTENDENT, MOUNT VERNON UNION HIGH SCHOOL
SKAGIT COUNTY, WASHINGTON

and

E. E. WINDES

ASSOCIATE SPECIALIST IN RURAL EDUCATION
BUREAU OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1924

ADDITIONAL COPIES

OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT

10 CENTS PER COPY

CONTENTS.

A TYPE RURAL HIGH SCHOOL.

MOUNT VERNON UNION HIGH SCHOOL, SKAGIT COUNTY, WASH.

INTRODUCTION.

This leaflet presents the essential details of the organization of the district, transportation of pupils, buildings and equipment, organization of the school, student body, administration, teaching staff, curricula, and vocational courses of study in a typical rural union high school of the State of Washington.

It is felt that such a presentation of the details relative to a particular school, which is worthy of emulation in many respects, will have high value for those engaged in rural secondary education.

The school is not presented as a perfect model. It does, however, offer a concrete illustration of the way in which problems of this type of school have been met. It is felt that many desirable features of secondary education are here presented in their concrete working out.

The term rural high school is here used to designate a high school enrolling 50 per cent or more of its total from farm homes. Where more than 50 per cent of the pupils enrolled are from farm homes, it is safe to say that all the major problems of rural secondary education are to be found.

Classification of schools as rural or nonrural, according to whether 50 per cent of the enrollment is from farm homes, is arbitrary, but it is much more significant than location of the school in places of a fixed population factor. The high school at Mount Vernon enrolls 242 pupils from farm homes and 170 pupils from other than farm homes. Accordingly, it is presented as a type of rural high school though located in a little city of 4,000 population.

Union high schools in the State of Washington have their legal corporate existence under the provisions of a law which was passed many years ago and reads as follows:

Whenever the residents of two or more adjacent or contiguous school districts in the same county may wish to unite for the purpose of establishing a union high school, the clerks of the districts, by order of the boards of directors, shall, upon a written or printed petition of five or more heads of families of their respective districts, each submit in writing a statement of

the proposed union of such districts, together with the question of the advisability of the formation of such union school district, to the county superintendent of schools, who shall within 15 days report in writing to the said clerks his approval or disapproval, his action to be based upon an investigation made by him to determine whether or not either school district so applying already maintains or is capable itself of maintaining a high school without uniting with another district, or with other districts, or whether or not the educational and other conditions of the districts desiring to so unite are such as to insure the maintenance of a high school in fact according to the provisions of this article.

THE DISTRICT.

Union High School District No. 1 is composed of 14 separate districts. The union was first formed in 1899, when Riverside District No. 38 united with Mount Vernon District No. 10. In the spring of 1914 Ridgeway District No. 29, Meadow District No. 3, and Lower Cedardale District No. 36, joined the union. During the spring and summer of 1920 the campaign was renewed to complete the large high-school unit, and a concerted action was made by the citizens of the entire community, resulting in the addition of the following districts: Avon District No. 19, Harmony District No. 20, Skagit District No. 7, Rexville District No. 11, Fir District No. 16, Conway District No. 24, Milltown District No. 59, Midway District No. 80, and Fredonia District No. 35. Cedardale District No. 83 consolidated with Mount Vernon District No. 10, which now forms District No. 306.

Union High School District No. 1 is composed of 14 districts as stated above. Mount Vernon, a city of about 4,000, is the community center of this entire district. The district is located in one of the richest agricultural sections of the United States. The principal industry in the community is general farming, consisting of dairying, raising hay, oats, cabbage seed, beet seed, spinach seed, turnip seed, together with large berry and poultry farms. The city of Mount Vernon is about 70 miles north of Seattle on the Great Northern Railway and also located on the Skagit River, the largest stream that flows into the Puget Sound. The land is very fertile and yields from 110 to 125 bushels of oats to the acre and averages 4 tons of hay to the acre. It is considered one of the best seed-growing localities in the United States, and there is no limit to the diversified farming possibilities of this particular community.

During July, 1920, the present site of 12½ acres was purchased for $16,200 by vote of the people. The assessed valuation of the district is over $5,000,000, and it is one of the largest and richest districts in the Northwest.

The students who live in the rural districts are transported to the city where the high school is located in regular trucks. The transportation is paid out of the current funds of the district. At the

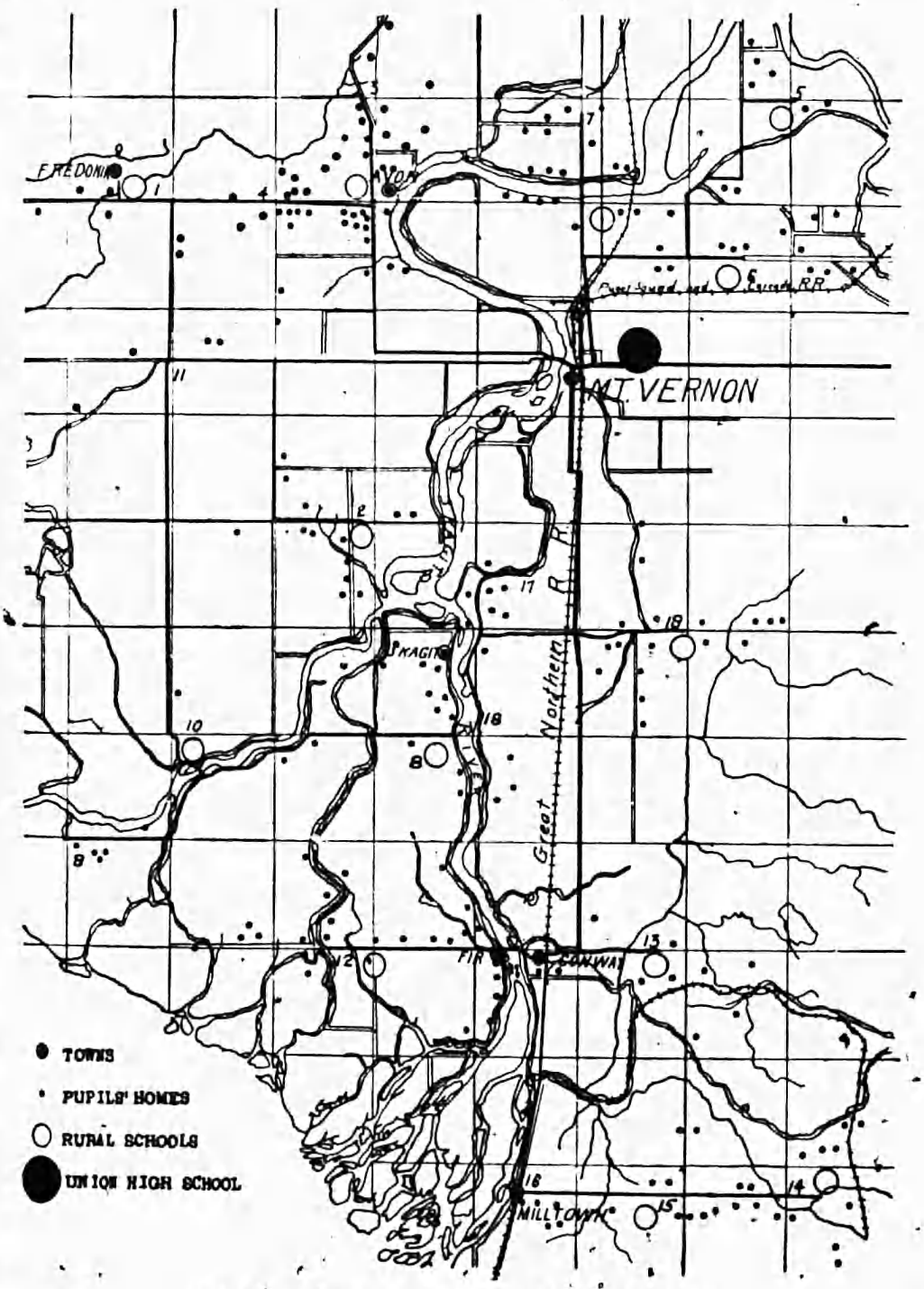


FIG. 1.—Mount Vernon Union High School District.

present time there are seven trucks operating out of the city into the different rural districts. Some of the trucks take pupils from two or more districts. A total of about 225 pupils are carried on these trucks to the school. The distance that the trucks traverse

each day varies from 9 to 10 miles up to 35 miles per round trip, and each truck carries from 25 to 40 students. In some cases these trucks also carry the seventh and eighth grade pupils to the city schools, where they take up the work in these grades instead of having additional teachers in the rural schools. Nearly all of the roads are paved, and only at the extreme terminals of the various routes is it necessary for trucks to go off the paved roads. It takes about 50 minutes for the truck that has the longest route to come from the end of the route to the high school. On some of the routes from 25 to 35 minutes only are required. The transportation costs the district $9,500 per year. The transportation is contracted for each year, and the directors and superintendent make rules and regulations governing the trucks and equipment to accommodate the students in a comfortable manner. The district keeps all of the trucks well insured to cover any accident that might occur while operating for the district. The different routes vary in cost from $120 to $165 per month. (The foregoing map shows the transportation routes.)

The trucks operate as follows:

Ridgeway-Harmony route.—Truck starts at schoolhouse at (1) and goes back to schoolhouse at (2) then back to Mount Vernon. There are 23 pupils on this route, and the approximate distance traveled (round trip) is 17 miles.

Avon route.—Starts at (3), goes to (4), then to Mount Vernon High School. There are approximately 40 students, and the distance traveled is 12 miles.

Riverside route.—Starts at (5), goes to (6), back to (7), then to high school. Number of students, approximately 42. Distance traveled, 13 miles.

Rexville-Skagit route.—Starts at (8), goes to (9), to (10), to (11), and then to high school. Approximately 18 pupils. Distance, 32 miles.

Conway-Fir route.—Starts at (12), goes to (13), and then to high school at Mount Vernon. Approximately 40 pupils. Distance, 18 miles.

Milltown route.—Starts at (14), then to (15), then to (16), and direct north to Mount Vernon High School. Approximately 29 pupils. Distance, 24 miles.

Meadow-Cedardale route.—Starts at (17), then to (18), then to (19), and then back to Mount Vernon. Approximately 30 pupils. Distance, 16 miles.

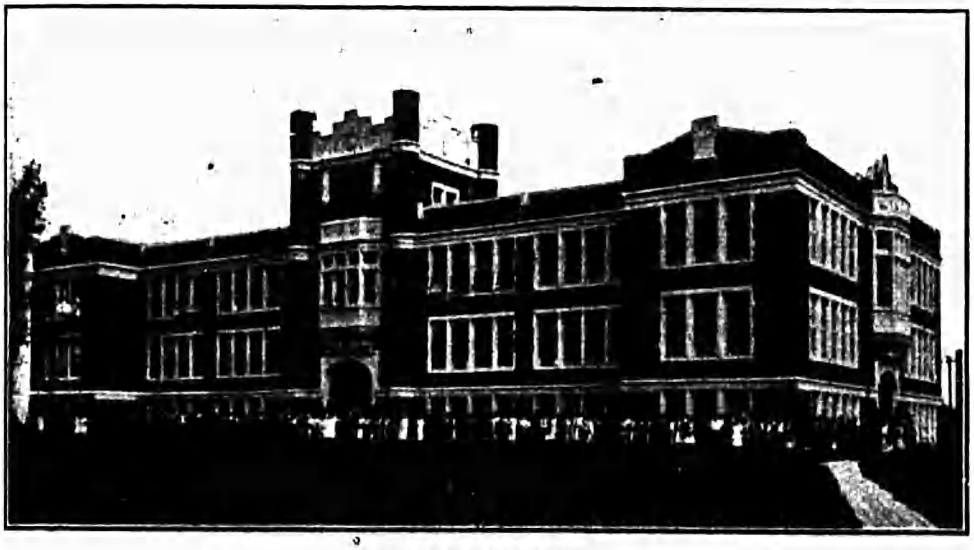
BUILDINGS AND EQUIPMENT.

In October, 1920, the taxpayers overwhelmingly voted bonds for $225,000 for high school buildings and equipment. The sum of $220,000 was expended for buildings, architect's fees, sewers, clearing

of grounds, and some built-in fixtures. The balance of the $225,000 is being expended in equipment as voted.

MAIN BUILDING.

The main building is designed on the Collegiate-Gothic plan of architecture. It is constructed of tapestry brick and trimmed with cream-tinted terra cotta. The corridors and stairways are of fireproof construction throughout and are finished in terrazzo. The boiler room, which is placed in a separate annex, is separated from the main building by an open area and metal-covered doors, thus removing all fire and explosive hazards. Stairways are placed at opposite ends of the building. There are 22 recitation rooms and laboratories, a large study hall, and library. The offices are located



MAIN BUILDING.

on the second floor, and consist of a general office and two smaller offices for the superintendent and principal. The principal's office has a fireproof vault for the school records. The lunch room will easily accommodate 250 students and is located under the auditorium.

The gymnasium is considered one of the best in the State. It is of brick and cast-stone construction and has a net playing space of 50 by 80 feet. The balcony embodies a new feature in construction and is made on the stadium plan. It will seat 700 or more persons. The bleachers are very steep, and all the spectators can see every play in any contest. It has dressing rooms and complete shower baths for both boys and girls, also for visiting teams. A complete steel locker system has been installed, providing individual lockers for each pupil.

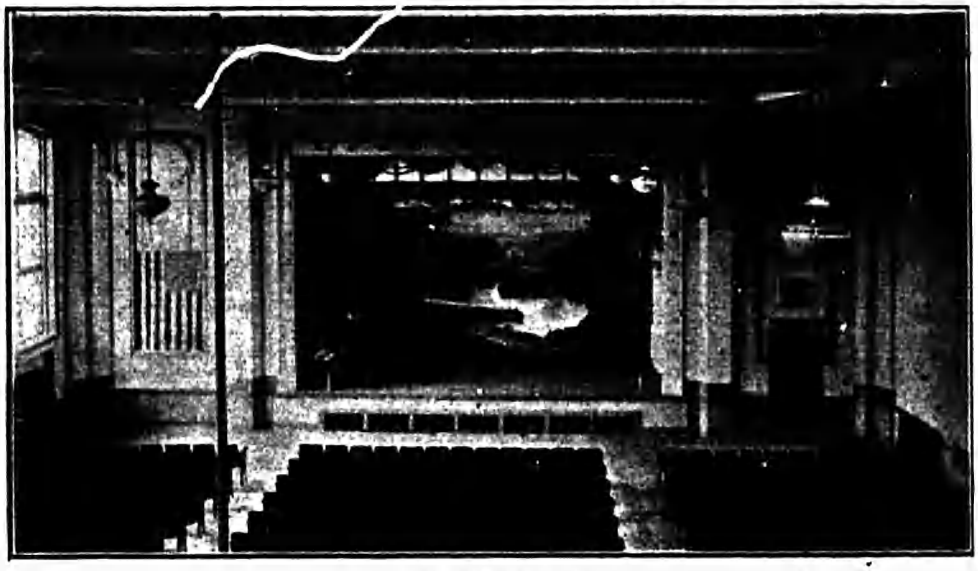
The auditorium has a seating capacity of 800 and is furnished with opera chairs. It has a balcony, and the rear portion of the

lower floor slopes toward the stage. The room is beautifully decorated in French gray, ivory, and cream tones. The stage is 61 feet in width and 17 feet deep behind the drop curtain. The proscenium opening is 29 feet wide and 18 feet high. The stage is fully provided with footlights and border lights, which are controlled from the stage. The electrical fixtures consist of 20 large chain pendants with Gothic etched globes. A fully equipped picture booth has been constructed in the balcony.

Adequate provision has been made for all the academic departments, and special provision has been made for such departments as domestic science and art, chemistry, botany, physics, commercial subjects, agriculture, and manual arts.

Steel lockers are placed in the corridors for the students.

The building features a new departure in heating and ventilation. Each room has a Moline univent, which consists of a small metal



AUDITORIUM.

cabinet inside of which is placed a direct-current motor. The motor is attached to two small fans which draw cold, fresh air from the outside and force it over a radiator in the cabinet and then into the room. This little plant is practically noiseless and gives positive ventilation and heat to all parts of the building, regardless of winds and other conditions that have always been a problem in all other systems of heating and ventilation. The boiler room has two large United States boilers.

The most modern and best plumbing fixtures have been used throughout the building. Toilet facilities and fire protections are provided for on each floor.

The electrical work is all in keeping with the dignity of the building. This can best be appreciated at night when the fixtures

show to the best advantage, particularly in the corridors and auditorium.

A large Howard master and program clock is placed in the office. This clock controls and regulates the 26 secondary clocks found in all the different classrooms and gymnasium. The clock rings all the bells and buzzers for the daily class programs. The entire clock and signal system is operated electrically through small electric motors and magnets that are run by batteries located in the engine room.

ORGANIZATION OF THE SCHOOL.

The school offers four years of work. The school day is divided into five periods of 70 minutes each. Laboratory periods are 70 minutes in length. Teachers are commonly assigned five teaching periods daily. Vocational teachers are an exception, teaching four

SCHOOL ORCHESTRA.

periods usually. Student organizations include a Torch Society affiliated with the National Honor Society, debating club, orchestra, glee club, athletic association, Boy Scouts, and Camp Fire Girls.

A cafeteria is operated in connection with the school where the students who wish may take their noonday lunch. From 150 to 250 eat lunch there daily. All pupils are given the privilege of bringing their own lunches and eating in the cafeteria. The cafeteria serves lunches at cost. The average lunch costs about 15 to 17 cents per day. The home-economics teacher is the manager and supervisor of the cafeteria. Two women are employed to do the cooking and most of the work, while some students are permitted to work behind the counters during the lunch period and either earn money or pay for their lunches through the time that they put in.

Regular trained instructors are employed by the district to carry on the work of physical education in the high school. A woman teacher takes care of all of the girls. She, together with a phy-

sician, examines them thoroughly and suggests treatment where needed. The teacher then conducts corrective gymnasium work. The same type of work is carried on with the boys. The heads of these departments also have charge of all the various branches of athletics connected with their respective departments.

Mental tests and measurements have been recently used in the school, and some progress has been made toward grouping pupils of approximately equal ability together in classes. Such work as has been done promises much when it has become so organized and developed that full benefits may be derived.

The community has employed a registered nurse who examines and looks after the high-school students and also all of the pupils in the grammar schools.

Educational Thrift Service work has been introduced in the high school this year. The students are urged and encouraged to inaugurate savings accounts; to deposit small amounts in the bank each week according to the plan of the Educational Thrift Service. The high school this year was 100 per cent, each student having an account in the bank.

COSTS OF EDUCATION.

The cost of operating the school is about $70,000 per year. The per pupil cost last year was $136. Thirty dollars per pupil is contributed by the State under the school law. The local district supplies the balance. The valuation of the district last year was $5,120,000. The tax rate for the school was 8 mills.

THE STUDENT BODY.

During the past 11 years the school has increased over 350 per cent. At present the total enrollment is 492. Of this total, 412 are distributed according to sex, grade, and age and according to residence at farm homes or nonfarm homes in tables which follow:

TABLE 1.—*Distribution of pupils from farm homes according to sex, grade and age.*

Age.	Ninth grade.		Tenth grade.		Eleventh grade.		Twelfth grade.		Total
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Up to 12									
12 to 13	1								1
13 to 14	4	13		2					19
14 to 15	18	20	5	4				1	48
15 to 16	12	11	8	22		2			55
16 to 17	4	8	11	11	6	9	4	9	62
17 to 18		2	1		7	8	3	9	30
18 to 19		1	1	2	3	1	5	3	16
19 to 20							2	6	8
Over 20	1							2	3
Total	40	55	26	41	16	20	14	30	292

TABLE 2.—*Distribution of pupils from nonfarm homes according to sex, grade, and age.*

Age.	Ninth grade.		Tenth grade.		Eleventh grade.		Twelfth grade.		Total.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Up to 12									
12 to 13	2	1							3
13 to 14	3	6	1						10
14 to 15	13	15	4	5		1			38
15 to 16	8	8	8	14	1	2		3	44
16 to 17	1		2	1	10	7	3	2	26
17 to 18	1		1	1	8	5	4	7	27
18 to 19					2	1	5	5	13
19 to 20		1		1	2	1	2		6
Over 20							3		3
Total	28	31	16	21	23	17	17	17	170

TABLE 3.—*Percentages of high-school pupils accelerated, of normal age, or retarded, for Mount Vernon and for rural high schools of the United States.*

Homes.	Grades and percentages.																					
	Nine.						Ten.						Eleven.						Twelve.					
	Accelerated.		Normal.		Retarded.		Accelerated.		Normal.		Retarded.		Accelerated.		Normal.		Retarded.		Accelerated.		Normal.		Retarded.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Mount Vernon farm home	13	23	45	36	40	40	19	14	30	53	50	31	0	10	37	45	62	45	28	33	21	30	50	36
United States farm home[1]	20	23	24	30	56	47	23	28	26	29	51	43	21	27	37	28	29	45	31	30	29	29	40	41
Mount Vernon nonfarm home	17	22	46	48	35	29	31	23	50	66	18	9	4	17	43	41	52	41	17	29	23	41	58	29
United States nonfarm home	17	15	23	32	60	53	17	19	26	32	57	49	21	25	27	32	52	43	20	21	28	37	52	42

[1] Data from sampling of rural high schools of the United States from a study in progress in the Bureau of Education.

The boys enrolled constitute 43 per cent of the total enrollment, as compared with 44 per cent for the United States as a whole and 44 per cent for a sampling of rural high schools of the United States, including schools from all States.[1] The boys constitute 44 per cent of the ninth grade as compared with 47 per cent for the sampling of rural high schools. The boys constitute 39 per cent of the twelfth grade as compared with 41 per cent for the sampling of rural high schools of the United States. For rural high schools of the United States as a whole the percentage of boys in the total of pupils enrolled decreased 6 per cent from grades 9 to 12, inclusive, and for Mount Vernon, 5 per cent. It seems that the school is fairly typical of the country as a whole as regards the ratio of

[1] An unpublished study of rural high schools of the United States. Study in progress in the U. S. Bureau of Education.

boys to girls and the decreasing ratio of boys to girls through the high-school years.

The number of boys enrolled in the twelfth grade is 45 per cent of those enrolled in the ninth, as compared with 35 per cent for rural high schools as a whole.

The number of girls enrolled in the twelfth grade is 54 per cent of those enrolled in the ninth, as compared with 45 per cent for the rural high schools of the country as a whole.

It seems evident that the relative appeal to boys and girls as sex groups is about the normal for the country as a whole, but that Mount Vernon holds approximately 10 per cent more in each group through the high school than does the country as a whole.

For farm boys those enrolled in the twelfth grade are 35 per cent of those enrolled in grade nine and for farm girls the corresponding

A COMBINATION LABORATORY AND RECITATION ROOM.

percentage is 54. For boys and girls from nonfarm homes the corresponding percentages are 60 and 54, respectively.

Farm boys do not continue in high school in as high percentages as farm girls or boys or girls from nonfarm homes. Farm girls, however, continue in the same percentages as nonfarm girls. Boys who do not live on farms continue in higher percentages than any of the other groups.

Numerous factors may explain these conditions, but such evidence as is available seems to indicate that the economic appeal is largely responsible for farm boys dropping out of school. The prosperity of this community probably explains the higher percentage of corresponding groups continuing in high school from year to year. It is possible, however, that a comprehensive high-school program, with well-developed vocational courses, is a factor in the situation. The table showing comparative percentages, which are accelerated, normal, or retarded, for Mount Vernon and rural high schools of the United States as a whole indicate, from the

higher percentages which are of normal age for the grade, that pupils are both better graded than the average and that the work offered by the high school is more nearly pitched on the level of average pupil ability than is usual. To what extent this is due to scientific placement or to greater uniformity in the elementary training of pupils than is common in rural districts is problematic. Both factors probably contribute to the condition.

When we compare progress of boys and girls of farm groups with nonfarm groups, it is evident that girls make better progress through the high school than boys, and the pupils enrolled from farm homes make better progress in high school than do pupils enrolled from nonfarm homes. This is shown by the following facts:

1. Boys enter retarded as compared with girls, and the relative percentage of retardation is materially increased by the time the senior year is reached.

2. Farm boys enter retarded as compared with nonfarm boys. They finish the high school accelerated as compared with nonfarm boys.

These striking differences in rate of progress are interesting from several angles. Are girls more intelligent? Is the high school better adapted to girls than boys? Do girls have a better attitude toward school work than boys? The same questions are suggested for pupils enrolled from farm homes as compared with those enrolled from nonfarm homes.

There is nothing to indicate that the curricula are better adapted to girls than boys. In fact, we have no means of determining whether such is the case. We may, therefore, eliminate the second item as a factor in progress. We do have, however, intelligence data, which are derived from the Otis group intelligence scale, advanced examination, presented in tables below. Normal intelligence is represented by an index of brightness (I. B.) of 100.

TABLE 4.—*Distribution of I. B.'s by sex, Mount Vernon Union High School pupils.*

I. B.	Frequency (boys).	Frequency (girls).	I. B.	Frequency (boys).	Frequency (girls).
35–39	4	1	115–119	14	22
40–44	1	0	120–124	13	18
45–49	1	0	125–129	9	17
50–54	1	2	130–134	13	13
55–59	3	2	135–139	6	12
60–64	5	1	140–144	7	6
65–69	5	3	145–149	1	8
70–74	2	6	150–154	2	6
75–79	4	1	155–159	2	2
80–84	11	8	160–164	5	0
85–89	16	12	165–169	1	3
90–94	16	13	170–174	1	0
95–99	18	9			
100–104	6	19	Total	192	281
105–109	16	17	Median	106	115
110–114	9	14	Norm	100	100

The entire group averages high in intelligence. The median for boys of 106 and for girls of 115 shows that the girls on the whole are slightly superior to the boys as measured by the Otis group intelligence scale. So far as ability is concerned we might expect a very slight acceleration of girls as compared with boys.

TABLE 5.—*Distribution of farm and nonfarm groups, Mount Vernon Union High School.*

I. B.	Frequency (farm group).	Frequency (nonfarm group).	I. B.	Frequency (farm group).	Frequency (nonfarm group).
35–39	3	2	115–119	21	13
40–44	1	0	120–124	17	13
45–49	0	1	125–129	14	11
50–54	2	1	130–134	14	15
55–59	3	2	135–139	8	8
60–64	4	3	140–144	6	7
65–69	5	2	145–149	4	4
70–74	5	1	150–154	4	4
75–79	3	2	155–159	1	1
80–84	13	5	160–164	0	2
85–89	19	9	165–169	1	4
90–94	20	11	170–174	0	1
95–99	17	10			
100–104	12	11	Total	232	170
105–109	21	9	Median	107	117
110–114	14	10	Norm	100	100

The median I. B. for pupils enrolled from farm homes is 107. The median for pupils enrolled from nonfarm homes is 117. The pupils enrolled from nonfarm homes excel the pupils enrolled from farm homes slightly more in ability to score on the Otis test than girls excel boys. Since girls make better progress than boys and farm pupils make better progress than nonfarm pupils, the evidence on intelligence indicates that it is not the factor determining differences in rate of progress.

A further factor influencing rate of progress could exist in the relative degree of selection existing for each group under consideration. It is evident from Tables 1 and 2 that a higher degree of selection operates for farm boys as compared with nonfarm boys. The percentage of farm boys continuing is materially less. Farm girls, however, continue in the same percentages as nonfarm girls, and the superior rate of progress is still evident. We may, therefore, rule out selection as the factor determining differences in progress.

There remains attitude toward school work. Apparently we must recognize that the boys and girls from farm homes have better habits of application to the serious tasks of the school than the group not reared on farms. This is in keeping with a rather general opinion that farm-bred pupils are apt to be among the best pupils of a school from the standpoint of application and achievement.

STUDENT CHOICE OF OCCUPATIONS.

The school has made some effort to give pupils guidance in occupations through conferences with the principal and teacher advisers, occupational talks and observation trips in connection with vocational courses in agriculture, home making, shop work, and commercial courses. The distribution of pupils according to occupational choice in the table that follows indicates that this work has influenced pupils to some extent in their choice of occupations.

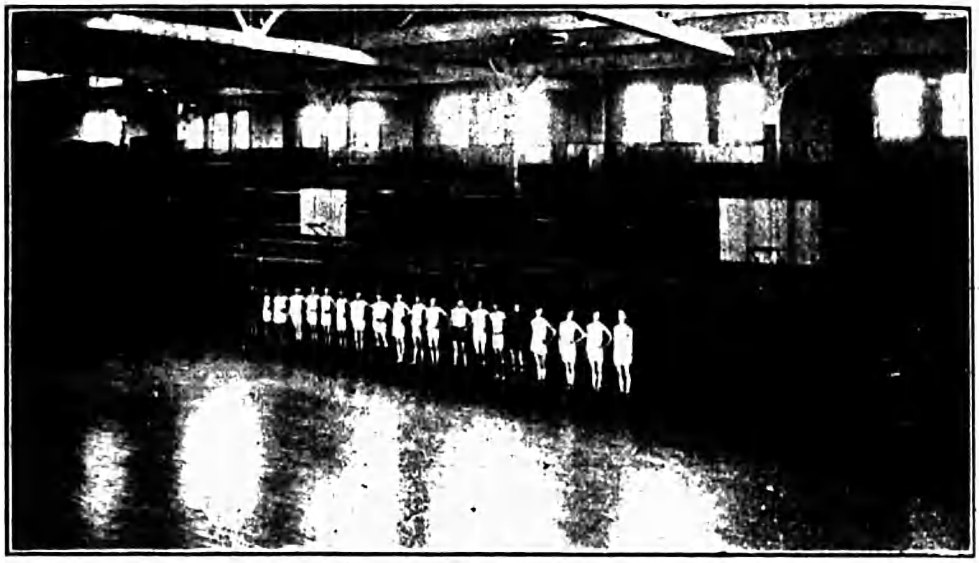
TABLE 6.—*Distribution of pupils by grade, sex, and choice of occupation.*

Occupation preferred.	Ninth grade.				Tenth grade.				Eleventh grade.				Twelfth grade.			
	Farm home.		Non-farm home.		Farm home.		Non-farm home.		Farm home.		Non-farm home.		Farm home.		Non-farm home.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Farming	9	1	1	0	14	2	0	0	8	0	0	0	7	0	0	0
Business	6	16	4	6	0	10	5	4	....	6	1	1	....	1	8	3
Professional	9	30	9	12	13	29	4	10	2	9	10	12	4	23	6	11
Mechanical	14	0	10	1	3	0	0	8	6	....	8	....	3	....	2	0
Other	1	8	4	12	1	5	1	4	0	5	4	4	0	6	1	2
Total choosing	39	55	28	31	31	37	10	26	16	20	23	17	14	30	17	16

The influence of the father's occupation shows in farming. A substantial percentage of boys from farm homes expect to farm. Very few who do not live on farms contemplate farming. Girls expect to go into professional or stenographic work, with a decided preference for professional life. A considerable percentage of boys look toward mechanical occupations, and miscellaneous occupations claim a substantial number. The distribution is much better than is found in the typical academic type of rural high school.

The student body of the high school has always been known for school spirit and enthusiasm. For the past 10 years the students, through plays and entertainments, have saved over $2,000 for the equipment of the building. The students paid $1,000 for steel lockers in the gymnasium. Other gymnasium equipment has also been purchased. The stage scenery and a large velour curtain comes from the student funds. The new Steinway piano is almost paid for, and this also comes from student funds. The students have always felt highly indebted to the citizens of this community and are endeavoring to show their appreciation of this fact, in a measure, by systematic saving and thrift, so that it is possible for them to procure

this equipment which will make the school better and more attractive. The spirit of the student body shows a commendable appreciation and attitude toward the taxpayers of this community.



BOYS CLASS IN THE GYMNASIUM.

Note the Stadium Plan of Seating.

THE PRINCIPAL.

The principal teaches two periods daily and supervises instruction three periods daily. He is provided with an office secretary for two hours daily. The principal advises with the superintendent in the selection of teachers and assigns teachers to work in cooperation with the superintendent. The principal holds meetings of the faculty twice each month in an effort to improve instruction. In addition, individual conferences are held as needed. During the past year a special study of tests and measures was made.

THE TEACHING STAFF.

There is a total of 19 teachers, including the principal, of whom 9 are men and 10 are women. All teachers are graduates of standard colleges. The assignment of work, teaching load, duties other than classroom teaching, and correlation of work assigned with training of teachers are shown in the table following.

TABLE 7.—*Statistics of teaching staff of Mount Vernon Union High School.*

Teacher	Subject.	Number of sections.	Total number of pupils instructed.	Duties other than teaching.	Subjects in which teacher specialized, major subjects in normal school or college.
1	Economics	1	38	Duties of principal	History.
	Modern history	1			
2	English	1	103	Coaches, dramatics	English.
	Public speaking	1			
3	English	5	119	Boys' athletics, assistant coach; sophomore class adviser.	Do.
4	....do	5	156	Librarian	Do.
5	Latin	1	104	Girls' supervisor; freshman class adviser.	Language.
	English	1			
6	French	5	102	Faculty adviser of annual publication.	Do.
	Spanish	1			
7	Geometry	4	113	.....	Mathematics.
	Algebra	1			
8	U. S. history	3	135	Coaches, girls' athletics	History.
	Ancient history	1			
	English history	1			
9	Algebra	5	135	Junior class adviser	Mathematics.
10	Chemistry	2	112	.....	Foreign trade.
	Geometry	1			
	Physics	2			
11	General science	3	125	Sophomore and freshman midyear student adviser.	Science.
	Botany	2			
12	Home economics	3	87	Manager of cafeteria	Home economics.
	Advanced algebra	1			
13	Home economics	3	87	Sophomore class adviser.	Do.
	General science	1			
14	Agriculture	4	68	Project work in agriculture.	Science.
15	Manual training	5	111	Freshman class adviser	Manual arts.
16	Bookkeeping	2	140	.....	Commercial subjects.
	Shorthand	2			
	Business arithmetic	1			
	Typewriting	4			
17	Girls' gymnastics	5	207	Study hall, 2½ days	Physical education.
1	Boys' gymnastics	5	225	Study hall, 2½ days per week.	Do.
19	Band	1	.....	.....	Music.
	Orchestra	1			
	Glee club	2			

THE SUPERINTENDENT AND BOARD OF EDUCATION.

The school district employs a superintendent, who carries on the supervision of the teachers and the entire school plant in general. It is his duty to recommend the courses that are to be pursued, the teachers that are to be employed, and everything that pertains to the administration of the plant. The school board of 14 members is organized into four committees, consisting of committees on education, buildings and grounds, transportation, and finance. Each committee works out its particular problems in collaboration with the superintendent, and then makes its recommendations to the board. The superintendent is held responsible not only for the teachers and the supervision of the work, but to a certain extent for the finances. In fact, he is supposed to enter and take the leading part in every phase of the work. The proper administration of the school budget involves an expenditure of nearly $70,000 per year, which takes a considerable amount of the superintendent's time. The superintend-

ent is given a secretary, who carries on all the secretarial work in the office and helps the principal in the details of the principal's office. The superintendent also has charge of the grammar schools in the city in which there are about 800 pupils and 24 teachers.

PROGRAM OF STUDIES AND CURRICULA.

The school offers a comprehensive program of studies designed to meet not only college entrance requirements but to provide practical training in selected vocations which will meet the need of those going directly into occupations.

TABLE 8.—*Program of studies and curricula offered in Union High School, Mount Vernon, Wash., 1922–23.*

Grade	College preparatory courses.		General.	Commercial.	Vocational.
	Classical.	Scientific.			
9th.	**English.** **Latin.** **Algebra.** Ancient history. Manual training. Domestic science. General science. Agriculture. Music.	**English.** **Algebra.** General science. Ancient history. Manual training. Domestic science. Agriculture. Music.	**Algebra.** **English.** General science. Ancient history. Manual training. Domestic science. Agriculture. Rapid calculation. commercial arithmetic. Music.	**English.** **Algebra.** **Commercial arithmetic, penmanship.** Ancient history. General science. Agriculture. Manual training. Domestic science. Music.	**English.** **Algebra.** **Manual training, agriculture, or domestic science.** General science. Ancient history. Agriculture. Commercial arithmetic, penmanship. Music.
10th.	**English.** **Plane geometry.** **Latin.** Modern history. Manual training. Botany. Bookkeeping. Agriculture. Music.	**English.** **Plane geometry.** **Botany.** Modern history. Manual training. Agriculture. Bookkeeping. Music.	**English.** **Plane geometry.** Botany. Modern history. Manual training. Domestic science. Bookkeeping. Agriculture. Music.	**English.** **Plane geometry.** **Bookkeeping.** Botany. Agriculture. Modern history. Manual training. Domestic science. Music.	**English.** **Geometry.** **Manual training, agriculture, or domestic science.** Bookkeeping. Botany. Agriculture. Modern history. Music.
11th.	**English.** **Latin or French.** **Advanced algebra.** Solid geometry. Economics. Chemistry. Typewriting. Agriculture. Music.	**English.** **Latin or French.** **Advanced algebra and solid geometry.** Chemistry. Agriculture. Economics. Typewriting. Music.	**English.** Chemistry. Advanced algebra. Solid geometry. Shorthand. Typewriting. Economics. French. Music.	**English.** **Shorthand and typewriting.** Advanced bookkeeping. Advanced algebra. Solid geometry. French. Economics. Chemistry. Music.	**Manual training, agriculture, or domestic science.** English. Chemistry. Advanced algebra Solid geometry. French. Typewriting. Music.
12th.	**Physics, chemistry, or botany.** **Latin or French.** **U. S. history and civics.** English. Spanish. Public speaking. Domestic science. Shorthand. Typewriting.	**Physics.** **U. S. history and civics.** **Latin or French.** Spanish. English. Public speaking. Domestic science. Shorthand. Typewriting.	**U. S. history and civics.** Physics. English. Shorthand. Typewriting. Public speaking. French. Spanish. Music.	**U. S. history and civics.** **Shorthand and typewriting.** English. Spanish. French. Physics. Music.	**U. S. history and civics.** **Manual training, agriculture, or domestic science.** English. Physics. Shorthand. Typewriting. French. Spanish. Public speaking.

Economics, solid geometry, advanced algebra, penmanship, trigonometry, and commercial arithmetic are one semester subject.

The vocational courses require the student to take all the work offered in the department selected.

Sixteen units are required for graduation.

Subjects printed in heavy type are required. Other subjects are optional.

No student will be allowed to carry more than four subjects who has not done good work in at least four subjects during the preceding semester.

Choice of optional subjects must be so arranged as to agree with the regular program.

Any student may choose an optional subject offered in a lower grade if the program permits and the principal approves.

The noncollege preparatory courses will also admit to college if care is taken in selecting the right options.

In the general course at least three units must be secured in one subject other than English and mathematics.

Solid geometry may be omitted in scientific course if physics, chemistry, and botany are selected.

Credit will not be given toward college entrance for less than two years' work in one foreign language.

Chemistry may be substituted for botany in meeting college entrance requirements.

In all courses students should select three years' work in one line in addition to English. Chemistry is required in the home economics course.

VOCATIONAL DEPARTMENTS AND COURSES.

HOME ECONOMICS.

The home economics course of study is designed to meet the needs of two groups of students, those from rural and those from town homes. The two groups have much in common, for the entire community is dependent upon farming industries. The population, while steadily growing, is shifting and prosperity is general.

Girls taking the course and planning to stay at home or major in home economics in college are encouraged to take the full four years offered; those going into other lines take only the first two years.

The school year is divided into two semesters. Clothing is studied the first semester; foods the second semester.

The clothing course of study includes—

First year (one semester): Economical planning and making of cotton garments.

Second year (one semester): Textiles and dressmaking.

Third year (one semester): Millinery and home furnishing.

Fourth year (one semester): Advanced dressmaking and tailoring.

The food course of study includes—

First year (one semester): Food preparation.

Second year (one semester): Elementary dietetics and serving meals.

Third year (one semester): Large-quantity cookery.

Fourth year (one semester): Household management; home care of sick.

SEWING.

(One Semester, Five 70-Minute Periods Weekly.)

FIRST YEAR.

I. Aims.

1. To teach the fundamentals of home dressmaking.
2. To give training in wise selection of materials and designs.
3. To emphasize neatness and accuracy in all work.
4. To develop skill in working with simple cotton materials.

II. Scope of course:

Hand sewing (plain and decorative stitches), use and care of sewing machine, use of commercial patterns, care and repair of clothing with practical application on worn garments, study of materials, study of appropriate dress for high-school girls.

Problems: Bloomers, slip or petticoat, nightgown, middy blouse, apron, gingham school dress.

Notebook required.

III. References: Textiles and Clothing, by McGowan and Waite; Shelter and Clothing, by Kinne and Cooley; Clothing for Women, by Laura Baldt.

DRESSMAKING.

(One Semester, Five 70-minute Periods Weekly.)

SECOND YEAR.

I. Aims.

1. To give practice in working with materials other than cotton.
2. To teach planning of garments with reference to wardrobe and to family budget.
3. To give a knowledge of materials through study of textiles.

II. Scope of course:

Costume designing, alteration of commercial patterns, clothing budgets, textile study, and testing.

Problems: Dress of thin cotton material, such as tissue gingham, voile, or organdie; wool skirt or dress; silk dress or blouse (one silk or wool textile notebook required).

III. Text: Textiles and Clothing, by McGowan and Waite.

IV. References: Clothing for Women, by Baldt; Costume Design, by Izor; Dressmaking, by Jane Fales.

FIRST YEAR—COOKING.

(One Semester.)

Aim of course:

1. To teach the underlying principles of the cookery of foods.
2. To encourage home application of work.
3. To develop habits of work, honesty, accuracy, reliability, responsibility, and good manners.
4. To aid girls to become home makers.

Content of course:

By the sequence of food principles and meals the following problems of cookery were considered:

1. Care of laboratory, home kitchen, and general order of work.
2. Laundry—care of towels and home work.
3. Fuels, fireless cooker, pressure cooker.
4. Water—beverages.

5. Carbohydrates, sugar and fruits, cereals, vegetables, flour mixtures.
6. Fats and oils, fats in foods and as a cooking medium.
7. Protein—milk, eggs, cheese, meats, fish, gelatin, vegetables rich in protein.
8. Vitamine.
9. Table service, planning, preparing, serving of breakfasts and luncheons, serving at formal dinners.
10. Cost, number of servings, and time required to prepare each recipe were estimated.

COSTUME MADE BY WEARER.

COSTUME MADE BY WEARER.

SECOND YEAR—FOODS.

(One Semester.)

Aim of course:

1. To teach elementary dietetics and the planning of well-balanced meals.
2. To increase interest in the principles of cookery.
3. To secure cooperation with the home and help solve its problems.
4. To help in vocational guidance.

Content of course:

1. Preservation of foods by canning, drying, smoking, and the use of preservatives. Home and commercial methods compared.
2. Review of the principles of cooking.
3. Study of the composition and food value of foods.
4. Process of digestion.
5. Hundred calorie portions of common foods weighed and measured.
6. Planning of dietaries, keeping exact record of food eaten, calories, and cost for one week.
7. Planning diets for overweight and underweight conditions.
8. Feeding of children.

9. Special diets discussed for tubercular patient, conditions of constipation, and feeding the convalescent.

10. Discussion of school lunches, planning those brought from home, and selection of those sold at school.

11. Family food budgets; division of money for the different foodstuffs.

THIRD YEAR. (1) HOME FURNISHING; (2) MILLINERY.

(One Semester.)

Home Furnishing.

I. Aims:

1. To increase interest in and appreciation for the home as the center of family life.

2. To teach the principles of art as applied to the furnishing of a home.

3. To give practice in home furnishing by means of school and home projects.

HAT MADE BY WEARER.

HAT MADE BY WEARER.

II. Scope of course:

Study of line, form, and color harmony and application to home furnishings.

Practical home projects selected by girls under supervision of teacher.

Notebook work: Detailed plans for furnishing or refurnishing a home on a definite allowance.

III. References:

Interior Decoration for the Small Home, by Rolfe; Interior Decoration by Parsons; Oriental Rugs, by Mumford; Furniture of Olden Times, by Frances Clary Morse; House Beautiful; and House and Garden.

Millinery.

I. Aims:

To teach the fundamentals of home millinery and to give practice in the making and trimming of hats.

II. Scope of course:

Drafting and designing hats in paper; making brims of buckram, flexible net and crinoline; use of various fabrics, such as silk, straw cloth, and braid, according to season; use of wire in making frames; remodeling.

Problems: Sport hat, dress hat, remodeled hat; handmade flowers and trimmings suitable for hats and dresses.

FOURTH YEAR. ADVANCED DRESSMAKING AND SIMPLE TAILORING.

(One Semester.)

I. Aims:

1. To give a practical knowledge of designing, pattern making, and simple tailoring.

2. To give further practice in dressmaking.

II. Scope of course:

Simple drafting; designing patterns on form; tailoring problems.

Problems: Suit or coat, graduation dress, and slip or similar problem. Notebook required.

III. References: Clothing for Women, by Baldt; Dressmaking, by Jane Fales.

THIRD YEAR—FOODS.

(One Semester.)

Aim of course:

1. To develop skill in large-quantity cookery, not as a trade or completed training for institutional management but the training that would be useful in the farm home.

2. To give practice in planning the distribution of work to different workers.

3. To give an appreciation of the cost, selling price, and profits of different types of lunch rooms, restaurants, cafeterias, etc.

Content of course:

1. Preparation of foods to be sold in the lunch room. Vegetables, sandwiches, soups, salads, meats, meat substitutes, and desserts.

2. Standard or general recipes with modifications for 50 servings.

3. Planning menus, combinations of foods expected by patrons.

4. Standardization of servings as to size, uniform product, and cost.

5. Estimation of costs, of total recipes, per serving, and modifications of recipes for seasons, effecting cost.

6. Storage of food in large quantities.

7. Buying in quantity versus small amounts.

8. Study of lunch-room equipment, selection, care, and upkeep.

9. Keeping of records, simple types of accounting.

10. Planning menus, orders, dining-room arrangement, and decoration, and serving force for special luncheons and banquets.

11. Division of class into groups, to serve practice meals for the lunch room using the cafeteria kitchen and equipment.

FOURTH YEAR—FOODS.

(One Semester.)

Aim of course:

1. To give the principles of home management and planning.

2. To give training in care of sick in the home.

Content of course:

1. Study of average income, with a budget for home expenditures.

2. Consideration of factors which affect choice of location of the home, arrangement and number of rooms, materials to be used.

3. Care of the sick room, ventilation, making the beds, cleaning floors, etc.

4. Choice of materials to be used in a sick room for walls, floor, drapes, and bed.

5. Precautions to take in care of patient with infectious disease.

AGRICULTURE.

The Smith-Hughes work in agriculture was established in this school in 1921 in an endeavor to more closely correlate the work of the school with the leading and almost exclusive industry of the community—namely, farming. The principal sources of income for the farmer in this section are dairying, poultry, small fruits, and seeds. The work given consists of a general course in animal husbandry for one-half year, the balance of which is given over to a study of dairy farming exclusively. This is given the first year, and consists of work in a study of the breeds, work in judging, milk testing, etc. The animals are studied in their natural environment—that is, the dairy farm itself. This is accomplished by field trips to the surrounding farms, for which a school truck is provided. No exclusive poultry course has as yet been introduced, but if present conditions continue it will soon be added. Poultry is studied in connection with the general animal-husbandry course and somewhat emphasized. In connection with the first year's work, projects consist of all phases of poultry raising and records and tests on dairy herds. About 80 cows are now on test with students, and poultry projects vary from 100 up to 1,500 laying hens. Most of these are purchased as day-old chicks, but feed and production records are kept from the time obtained.

The second year's work consists of a study of crops and soils. This is made seasonal as much as possible and local crops and conditions are stressed. In connection with this year's work all phases of fruit production are studied, particularly those applying to the small fruits and a study of propagation, spraying, pruning, and grafting. More orchards are offered than the class can possibly care for, but during the past spring about 175 trees were pruned by the class.

The third and last year's work consists of one semester's work in farm mechanics and farm machinery and one semester of a study of the different phases of farm management. For the study of farm machinery the local implement men throw open their warehouses. The different machines and their work are also studied in the field.

Projects are also carried the last two years, which consist of farm accounts, potatoes, seed crops, small fruits, etc., or the first-year project may be enlarged and continued.

The enrollment in vocational agriculture has increased from 30 in 1919 to 67 in 1922–23, and considerable interest is being shown in the work by the community at large.

SAMPLE PROJECT IN POULTRY.

One boy is caring for 225 laying hens and has 1,000 chicks purchased at one day old. He gets principles of brooding, culling, feeding for growth and for production, and marketing of product. Since November 1, 1922, his sales of eggs have averaged more than $100 per month, of which approximately one-half was profit. This project was started in the fall of 1921. Since that time one laying house, 20 by 36 feet, and a brooder house, 16 by 24 feet, have been built. He is planning to build another laying house this summer. He has become very much interested in chickens, and will probably follow some phase of poultry production after completing school.

In poultry projects the following records are kept:

POULTRY ON THE SCHOOL GROUNDS.

1. Cost of feed, grit, litter, disinfectants, and all incidental expenses such as depreciation, equipment, labor, etc.

2. All products sold, used at home, or on hand at the completion of the year. Anything used at home is figured at current market prices.

Projects in seed production, including cabbage, spinach, turnip, beet, and rutabaga, are now going on. Complete cost accounts are kept and considerable outside reading required in connection with these, as well as all other projects.

COURSE OF STUDY.

The purpose and aim of agriculture in the Mount Vernon Union High School is as follows: To give the student a broad knowledge

of the fundamentals and principles underlying agriculture and related subjects; to acquaint the student with the best modern methods in the application and science of farming; to offer further training in academic subjects which will qualify him to become a progressive farmer and a good citizen.

The course of study in agriculture covers three years' work.

The time includes seven and one-half hours of class work per week, and equal amount of work will be required by each student on some supervised home project.

At least 7½ hours per week will be given to one technical related subject, and 7½ hours to a nonrelated subject, as practical English, civics, bookkeeping.

FIRST YEAR.

(First Semester.)

Animal husbandry.

Text: Types and Breeds of Farm Animals, by Plumb.

References: Practice of Judging Livestock, by Gay; Purdue Bulletin No. 29; Feeds and Feeding, by Henry and Morrison; Breeds and Breeding, by Henry and Morrison; Beef Production, by Humford; State Experiment Station.

A complete high-school agricultural library is maintained, and the agriculture department is kept in close touch with all experiment stations. Ten monthly and weekly periodicals are on the library lists.

Scope of work.

Stock judging:

A. Study of form and function of animal parts by means of score card and comparative judging.

B. Estimating weights by comparison.

C. Methods of telling age of (1) horses, (2) cattle.

D. Various defects and diseases: (1) Cause, (2) symptoms, (3) remedies.

E. Gaits and action of the horse.

F. The ideal type of—

1. Horse: (*a*) Saddler, (*b*) trotter, (*c*) draft, (*d*) racer.
2. Beef cow: (*a*) Different breeds.
3. Pigs: (*a*) Lard type, (*b*) bacon type.
4. Sheep: (*a*) Mutton, (*b*) wool.
5. Goats.
6. Poultry.

G. Study of pedigrees, paying particular attention to swine and dairy cattle.

While no laboratory book is used, the students are taken on trips twice a week to judge animals and become acquainted with them. The score-card system is extensively used at first to give the student an idea of the value of various parts of the body. Later on, comparative judging is done without the use of score cards, using draft horses common in this State. The farm is the laboratory, and animals are studied in their natural environment.

Project 1.—The keeping and management of hogs, poultry, cattle, sheep, goats, and rabbits for a term of one year or longer, keeping a complete record of time put in, expenditures, receipts, growth of individuals, feeds, breed of stock, and everything that would pertain to the successful management of any breed.

FIRST YEAR.

(Second Semester.)

Dairying.—As dairying is the principal enterprise in Skagit County, this subject is one of the most important branches in the high-school curriculum. The entire class is composed of young men whose fathers are dairymen. For this reason dairy problems are studied in close cooperation with the farm. Problems that include both scientific and practical dairy methods are thoroughly worked out, so that a student finishing this course is well qualified to manage a dairy herd.

Outline of work.

The dairy cow: (*a*) Dairy farming as a profitable business; (*b*) evolution of the dairy cow; (*c*) selection of cows: (1) purity of breeding, (2) pedigrees; (*d*) selection of dairy sires; (*e*) building up a dairy herd; (*f*) breeds of cattle; (*g*) feeding the dairy cow; (*h*) silos and silage; (*i*) methods of keeping records; (*j*) herd management; (*k*) dairy barn and milk house; (*l*) milk and its products; (*m*) market standards and requirements; (*n*) testing milk and creams by Babcock test, etc.

Text: Dairy Farming, by Micheals.

Reference: Bulletins.

Time: Three recitations per week, 70 minutes each; two laboratory periods, 70 minutes each; home projects to require equivalent time.

Laboratory work consists of testing cream, milk, skim milk, separating, visiting dairy farms, creameries, condensers, and judging dairy cattle. The students score up dairy barns, draw plans of barns, estimate dimensions of silos for various herds, etc. Trips are made into the country and the students test milk and cream for farmers at their farms or at school. Demonstrations are given every year in various neighborhoods. This work is made practical and is applied to local conditions. Classes are called upon from time to time to test entire dairy herds in the surrounding community as a part of the required work.

Projects.—The most important projects are the milking and care of the cows, weighing the milk, testing, weighing the feeds and balancing the rations, figuring out the cost per pound of milk, cost per pound of butter, cost of feeds, etc.—in other words, keeping a complete record of the dairy herd.

SECOND YEAR.

(First Semester.)

Field crops and soils.—Field crops and soils are very important. Without either the Nation's food supply would soon be used up. The study of these two most important phases of agriculture aims to relate them to local conditions. The most important crops of this community are studied and the student made familiar with them. Soils are analyzed, and experiments carried out with different crops on different soils.

The course includes the following:

I. Classification of field crops: (*a*) Definition of terms; (*b*) classification of crops; (*c*) use of crops; (*d*) choice of crops; (*e*) diversification.

II. The growth of plants: (*a*) The seed and its germination; (*b*) what the leaves do; (*c*) the roots and their uses; (*d*) elements of plant food and their uses; (*e*) the production of seed.

III. Grain crops: (*a*) Corn—(1) Origin and description; (2) soils and fertilizers; (3) cultivation; (4) diseases and insects; (5) judging; (*b*) wheat; (*c*) oats; (*d*) barley; (*e*) rye; (*f*) flax.

IV. Forage crops: (*a*) Introduction; (*b*) making of a meadow; (*c*) hay and hay making; (*d*) pastures; (*e*) the grasses; (*f*) perennial grasses; (*g*) annual grasses; (*h*) the clovers; (*i*) alfalfa; (*j*) root crops.

V. Rotation of crops: (*a*) Advantages; (*b*) effect on physical condition of soil; (*c*) keeping down weeds; (*d*) effect on crop yields; (*e*) relation of soil fertility; (*f*) rotations for different sections.

VI. Weeds: (*a*) Classes of weeds; (*b*) methods of eradication.

Text: Field Crops, by Wilson and Warburton.

References: Soils and Fertilizers, by Snyder; Forage and Fiber Crops, by Hunt; Soils and Soil Fertility, by Whitson and Walster; The Soil, by King.

Three recitations, 70 minutes each, and two laboratory periods, 70 minutes each, per week.

Projects: These will include the growing and experimenting with various field crops, such as oats, potatoes, etc., adapted to local conditions.

SECOND YEAR.

(Second Semester.)

General horticulture.—After studying home gardens, the students draw plans of a garden and hotbed, and each spring a garden is planted on the campus. The students build the hotbed and put in all of the garden, taking care of it, and keep records of time of planting, appearance of plants, etc. Visits are made to gardens and orchards in the vicinity, and first-hand information is obtained from the owner.

Orchards are studied with regard to their improvement. Different fruits are classified and judged and plant breeding is given careful study.

Outline.

I. The vegetable garden: (*a*) Home gardening; (*b*) gardening in general.
II. Manures—(*a*) Classes: (1) Animal manures; (2) green manures.
III. Garden tillage: (*a*) Object; (*b*) garden implements.
IV. Seed sowing and transplanting.
V. Seeds and seed growing.
VI. Glass structures: (*a*) Hotbeds and cold frames; (*b*) greenhouses.
VII. Insects and weeds.
VIII. Marketing: (*a*) Advertising; (*b*) selling; (*c*) grading, etc.
IX. Vegetables and fruits for exhibition.
X. Orchard tillage.
XI. Classification of fruit trees.
XII. Care of trees: (*a*) Spraying; (*b*) pruning.

Texts: Green's Vegetable Gardening; Green's Popular Fruit Growing.

References: Spraying of Plants, by Sodeman; Plant Breeding, by Bailey; Encyclopedia of Practical Horticulture, by Lowther.

Time: Three recitations, 70 minutes each, and two laboratories, 70 minutes each per week.

Projects.—1. Keeping a hotbed or hothouse and growing vegetables for the market and for home use. This includes experiments with different vegetables and growing vegetables that meet market conditions.

2. Being a member of a boys' and girls' gardening club or acting as a leader for the club in the community.

3. Growing a garden during the spring and summer months, with complete written record showing time put in, expenditures, receipts, amount raised, etc.

4. Raising seed plants, such as cabbage, mangles, onions, rutabagas, carrots, parsnips, cauliflower, celery, kolrabi. Each of these crops requires two years' time.

5. Having complete charge of an orchard for a period of 1 year or longer.

THIRD YEAR.

(First Semester.)

I. Farm management.

II. This course consists of practical problems which farmers engaged in dairying, stock raising, general or specialized farming, have to contend with. Practically every student enrolled in this course is a farmer's son, so that each student has his own farm problems to work out.

III. Among the topics given special attention are:

1. Shall I be a farmer? (*a*) Profits to be expected; (*b*) cost of living on farms, etc.

2. Types of farming: (*a*) Examples of the influence of climate, soil, and topography; (*b*) relation of transportation to type of farming; (*c*) relation of labor to type farming, etc.

3. Diversified and specialized farming.

4. Intensive and extensive farming: (*a*) Intensive and extensive methods; (*b*) intensive and extensive enterprises.

5. Maintaining the fertility of the land: (*a*) Organic materials; (*b*) mineral materials; (*c*) chemical fertilizers—nitrogen, calcium, phosphorus, and potassium; (*d*) farm manures.

6. Size of farms.

7. Capital: (*a*) Ways of farming with small capital; (*b*) relation of capital to profits; (*c*) life insurance for farmers.

8. Methods of renting land.

9. Farm labor.

10. Farm equipment.

11. Cropping systems: (*a*) Reasons for crop rotation; (*b*) characteristics of a good cropping system.

12. Marketing farm products: (*a*) Time to sell products; (*b*) ways of selling products.

13. Farm records and accounts: (*a*) Kinds of accounts; (*b*) account with persons or firms; (*c*) annual inventory; (*d*) receipts and expenses.

14. General review of all previous agricultural work.

Text: Warren's Farm Management.

Time: Three recitations of 70 minutes each and 2 laboratory periods of 70 minutes each per week.

Projects:

I. Taking over the farm accounts for the year.

II. Growing any crop and having its complete management.

III. Superintending the building of any structure on the farm.

IV. Taking over the management of an orchard. This would include cultivating, spraying, pruning, market conditions, etc.

V. Raising bees, and making a special study of bees.

VI. Superintending the buying and selling of everything on the father's farm for a term of 6 months or 1 year.

Manual training.—It is our purpose in the subject of manual training to approach the boy from a practical rather than from a theoretic standpoint. He applies his skill to the project both mentally and physically. The problem is imaged, then drawn out on a piece of paper. From this he applies his physical skill to prove his judgment. This brings up many minor problems that are entirely unseen in a drawing and enables the boy to understand the problems of construction and assembling.

The problems used vary considerably, depending upon the skill and interests of the individual. With the advice of the instructor the pupil selects a project which he is most interested in and can make use of, yet the pupil is guided so that the training he receives will be of value to him beyond the shop.

A country boy is advised to construct a farm project along with something demanding skilled work, such as a piece of furniture. If a boy is interested in cabinetmaking of any phase, he is expected to construct a difficult problem involving many different phases of the work, while a boy taking this subject for no special vocational

aim is given various kinds of work, not so difficult, but yet those which will give him a drill in the use of many different kinds of tools.

Mechanical drawing.—The work of the freshman year consists of projections and developments. This is a drill in the use of drawing tools as well as teaching the conventions of drawing. It also teaches the pupil to read a drawing and image an object.

The work of the sophomore year consists of a course in machine drawing and teaches the conventions connected with this type of drawing as well as the mechanical construction.

The work of the junior year consists of a course in architectural drawing. This course takes as its problem an original design for a

EXHIBIT OF ARTICLES MADE BY MANUAL TRAINING CLASSES.

garage. It emphasizes the convenience of architectural drawing as well as construction.

The senior year is a continuation of the junior year, using a house as its problem. In this work the problem of construction is especially emphasized.

Shop work.—The bench work of the freshman year consists of simple projects bringing in principally the half-lap joint, surfacing, and squaring material to size. The projects are small, not involving a problem of construction, but the stress is laid upon the use of hand tools which are most commonly used, such as the saw, plane, square, marking gauge, and chisel. The shellac finish being easy to apply and handle is introduced as a finish to the projects.

The sophomore year is more or less a continuation of the freshman year, but puts some stress upon a problem of construction along

with the drill in the use of hand tools. The second-semester students are allowed to use power machinery, which permits the pupils to give more attention to the problem of construction and less to the use of hand tools. The mortise-and-tenon joint is emphasized in this construction. The varnish finish is introduced in this course along with its use of shellac.

The junior year's work consists of problems of construction. The pupil is expected to design a large project and proportion it properly with the advice of the instructor. Mitering and more exact joints are demanded. The problem of finishing is especially emphasized in this course, demanding that the pupil use patience and be particular not only throughout the construction but also in the finishing touches.

The senior year's work is not so definite in its purpose, but is adapted more to the individual's needs. In some cases a problem of construction is emphasized; in others, exactness of work. Both are really involved, but more stress is laid upon one than the other as it may apply to the individual. Carving and inlay work is an example of exactness, bringing out the finest work in cabinet making, while in the problem of construction a writing desk, an extension table, a phonograph, or a large farm project, such as a hayrack or wagon box, are good projects, bringing out the constructive idea of a contractor or carpenter along with exact work.

Commercial course of study.—The commercial course of this school was inaugurated in the fall of 1914 with a mere handful of students. It has grown steadily until there are at present approximately 150 students enrolled in the department. The subjects and time devoted to each are as follows: Shorthand, two years; typewriting, two years; bookkeeping, two years; English, four years, which includes one semester of business English; penmanship, one semester; business arithmetic, one semester; and business spelling, one semester. Students enrolled for the complete commercial course also receive instruction in stencil cutting, in the use of the adding and calculating machines, rapid roller copier, mimeograph, mimeoscope, and graphic duplicator. Instruction is also given in vertical, alphabetical, and numerical filing. When selecting textbooks, care is taken to select only those that give the students a practical, working, commercial education and, in so far as possible, training of the type best suited to our own community. For instance, in the typewriting department, budgets that are made up of model business letters, legal forms, court documents, etc., are available that have been taken from the offices of local business and professional men, and the advanced students are required to type these many times, so that when any of these forms are dictated to them they

know exactly how they should be arranged on the page. When it was impossible to select texts of this type, special budgets were prepared to supplement the texts that were selected. However, the department has always kept in mind the necessity for training that would also equip the students for positions in the larger cities and in other parts of the country as well.

TYPEWRITING.

FIRST YEAR.

(First Semester.)

Text: Rational Typewriting (Medal of Honor Edition), by Rupert P. SoRelle and Ida McLenan Cutler.

Credit: One credit for the semester.

Speed requirement: Twenty words a minute for 15 minutes.

The first 12 lessons of the text must be completed, including all supplementary work. Learn proper position, fingering, and mechanical parts of the machine.

Five periods per week.

FIRST YEAR.

(Second Semester.)

Text: Rational Typewriting (Medal of Honor Edition), by Rupert P. SoRelle and Ida McLenan Cutler.

Credit: One credit for the semester.

Speed requirement: Thirty-five words a minute for 15 minutes.

Five periods per week. The student is required to complete the textbook.

SECOND YEAR.

(First Semester.)

Review the first six lessons of the textbook, covering exercises for all fingers. Work on Special Speed Building Budgets, prepared by E. E. Getchell; also work in circular-letter work, carbon-copy work, stencil cutting, preparing letters for copying on the rapid-roller copier and graphic duplicate and mimeographing.

Speed requirement: Forty-five words per minute for 15 minutes.

Credit: No credit is given for the second year's work, although all students taking the complete commercial course are urged to take two years of typewriting, as this would thoroughly qualify them for the very best positions and increase their earning capacity. Students taking two years of shorthand must reserve a period or at least a part of a period for transcribing their shorthand notes.

SECOND YEAR.

(Second Semester.)

Typewriting for this semester requires the student to do a great deal of circular-letter work, copying from rough draft, bulletins, short stories, typewriting for the various departments of the school, and Special Speed Building Budgets, prepared by E. E. Getchell. They are also given additional work in stencil cutting and mimeographing, work on the graphic duplicator, adding machine and rapid-roller copier, and some work on the mimeoscope. The student is required to learn all kinds of business forms, different styles of letters, with complete suggestions as to the best arrangement of the work on the page. The special budgets are made up of model letters, business forms, legal and court documents, rough draft, etc. The forms of court and legal documents are models that have been taken from offices of business men and attorneys in Mount Vernon, which familiarizes the students with precisely the same kind of forms they will encounter when taking positions with the local business houses.

Speed requirement: Fifty-five words a minute for 15 minutes

Credit: No credit is given for the second year's work.

General statement.—All work must be rewritten which has more than three errors to the page. Work will be graded as follows: No errors, E; one error, G; two errors, F; three errors, P; four errors, failure, and the work will not be accepted.

All students are required to take the Remington, Underwood, and L. C. Smith typewriting tests, competing for the awards offered by these companies.

Freshmen and sophomores may take typewriting as an elective. Full commercial students are urged not to schedule for typewriting until their junior year.

SHORTHAND.

FIRST YEAR.

(First Semester.)

Complete the first 16 lessons of the text, including a thorough review of each lesson.

Text: The Robert F. Rose Expert System of Shorthand.

Five recitations per week.

Credit: One credit for the semester.

FIRST YEAR.

(Second Semester)

Complete the text, covering numerals, commercial correspondence, law office work, and some work in court reporting. Review the text

in connection with more correspondence work in How to Become a Private Secretary, by Robert F. Rose.

Text: The Robert F. Rose Expert System of Shorthand and How to Become a Private Secretary, by Robert F. Rose.

Five recitations per week.

Credit: One credit for the semester.

SECOND YEAR.

(First Semester.)

A complete mastery of the principles of phrasing and the laying of a strong foundation for speed, which requires much repetition work, are the supreme efforts during this semester's work.

Text: The Robert F. Rose Expert System of Shorthand (review), a specially prepared word and phrase list by E. E. Getchell to be used as a continuous review, and Dictation Course in Business Literature, by Charles G. Reigner.

Five recitations per week. Credit: One credit for the semester.

SECOND YEAR.

(Second Semester.)

Here the finishing work to make the student into an *accurate*, speedy, and dependable writer must be done.

The advanced dictation course is planned to give the student a large working vocabulary, to develop endurance in taking dictation, and to acquaint him with the highest art in shorthand writing. This course is arranged to familiarize the student with business terms, ways of working, and to give him a thorough training and drill in handling the latest and most approved office forms.

Text: The New Universal Dictation Course, by W. L. Musick. This text covers dictation in 28 lines of business, thus acquainting the student with practically every business term that he will ever encounter in any business office.

Five recitations per week.

BOOKKEEPING.

FIRST YEAR.

(First Semester.)

The first semester's work of this course is designed to acquaint the student with the fundamental principles of debit and credit as applied to double-entry bookkeeping, including the use of the journal, cashbook, sales book, purchase book, and the ledger.

Credit: One credit for the semester.

Text: Twentieth Century Bookkeeping and Accounting, by James W. Baker, published by the Southwestern Publishing Co., 516 Mission Street, San Francisco, Calif.

FIRST YEAR.

(Second Semester.)

The second semester's work gives practice in partnership bookkeeping, accounts with fixed assets, depreciation, operating and nonoperating income, operating and nonoperating expense, controlling accounts, books of account, auxiliary books, business forms and vouchers, accruals and deferred items, adjusting entries and reports, partnership problems, consignments, etc.

Credit: One credit for the semester.

Text: Twentieth Century Bookkeeping and Accounting.

SECOND YEAR.

(First Semester.)

The work for the second year is planned to cover two full semesters' work, and aims to impart to the student a thorough knowledge of corporation bookkeeping and accounting. All the accounts necessary to the proper recording of all transactions, in connection with this class of bookkeeping, are very clearly illustrated, and the student is required to work out many problems and write up the sets. Income-tax procedure is taught, and the student is also required to prepare income-tax reports for a single proprietor, a partnership, and a corporation. Considerable time is devoted to special labor-saving methods, such as special ruling.

Credit: One credit for each semester.

Text: Twentieth Century Bookkeeping and Accounting.

BUSINESS ARITHMETIC.

This course begins with a thorough review of the four fundamentals of arithmetic and teaches the short cuts that are recognized by business men and accountants as practicable. There are numerous facility drills and the student is trained to do a great deal of the work mentally without the aid of pencil or paper. The text also covers work in common and decimal fractions, percentage, graphs, interest, problems in borrowing capital, bookkeepers' problems in settling accounts, business ownerships and investments, denominate numbers, income-tax procedure, etc.

Credit: One credit for the semester.

Scope of course: Topics enumerated above.

Text: Business Arithmetic, by Preston E. Curry.

(NOTE.—There is frequently a first and second semester class in this subject.)

PENMANSHIP.

Text: The Palmer Method of Penmanship. Commercial School Edition.

Credit: One credit for the semester.

(NOTE.—This is a one-semester subject, being given the second semester only.)

PHYSICAL EDUCATION FOR GIRLS.

Physical education for girls in Union High School aims to give the girls health instruction, to form health habits, and to develop and train them in healthful activities which will suit their particular needs.

The formation of health habits has been aided by examinations and follow-up work by the local Red Cross nurse, by hygiene instruction, and by having each girl keep track of her own health habits by use of a card system.

Activities for girls are decided by a medical and physical examination, wherein it is determined whether the girl should have rest, special corrective treatment, or normal activity. The course in physical education is taken by all girls.

The normal activities include general gymnastic exercises, stunts, and games. Since there is such a great interest in games, every opportunity is taken to correlate gymnastic exercises with activities in games, by giving an exercise which will develop skill in that activity and therefore in the game. Games, aside from group games, which are used largely are playground baseball, long base, volley ball, kick baseball, captain ball, and similar games.

In all their activities the ideal of sportsmanship is emphasized and the attempt made to have this same spirit carried over into other things by definite application.

PHYSICAL EDUCATION FOR BOYS.

All boys except those who are physically unable and those participating in athletics are required to take physical exercises for two periods weekly, each of 70 minutes duration, during the school year.

About 125 boys were enrolled last year. Classes for the boys are held on Tuesdays and Thursdays.

The first 15 minutes of each period is given to Swedish exercises. Special effort is made to cause the muscles present to respond readily to volition, to improve the functional activity of the body, and to counteract and correct tendencies to abnormal development. These exercises are followed by about 10 minutes of simple military drill,

such as the facings, squads right, etc., and different formations in marching.

The next 20 minutes are devoted to games. The favorite games played are basket ball, volley ball, and indoor baseball.

All classes are excused 20 minutes before the close of the period to give the classes ample time to take a shower bath and dress.

The work, as far as possible, is varied so as to keep the pupils keen and anxious to attend all classes.