

# VOCATIONAL EDUCATION

ROCHESTER PUBLIC SCHOOLS

1913

From the

**Fifty-Sixth Report of the Board of Education**

**Rochester, New York**

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## Vocational Schools for Boys.

Alfred P. Fletcher.

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### BEGINNINGS.

Vocational education in the Public Schools of Rochester had its beginning in the establishment of the Rochester Shop School (*first called Rochester Factory School*) in December, 1908. It was organized with :

1. Two instructors — A shop teacher and a class room teacher.
2. Fifty pupils — Boys fourteen years old who came from the 7th and 8th grades of the Public Schools and from the 8th and 9th grades of the Parochial Schools.
3. One course of instruction — Preparation for cabinet making.
4. An equipment costing approximately \$500, which included simple woodworking machines (*which were installed by the pupils*), cabinet makers' benches and hand tools.
5. An 8 room school building (*Lexington School No. 34*) not then needed by regular grade classes. The alterations of the building were made by the pupils.
6. The endorsement of the Central Trades and Labor Council.
7. An Advisory Committee composed of Lewis P. Ross, E. E. Bausch, C. W. Trotter, Michael J. O'Brien.

### PURPOSE OF THE SCHOOL.

The fundamental aims of the school were :

1. To hold in school boys of 14 who were about to drop out to go to work. (*See Table I.*) (Note the large number of pupils who drop out of school at the age of 14-16 from the 6th, 7th and 8th grades).
2. To give a practical training for a vocation.

TABLE I.

SHOWING AGES AT WHICH PUPILS LEAVE SCHOOL.

At 5 years.....	1
6 years.....	19
7 years.....	20
8 years.....	19
9 years.....	18
10 years.....	12
11 years.....	14
12 years.....	20
13 years.....	34
14 years.....	203
15 years.....	282
16 years.....	219
17 years.....	50
18 years.....	6
	<hr/>
	917

SHOWING GRADES FROM WHICH PUPILS LEAVE.

From 1st grade.....	53
2nd grade.....	29
3rd grade.....	19
4th grade.....	26
5th grade.....	41
6th grade.....	205
7 th grade.....	254
8th grade.....	215
Special Classes.....	18
Foreign Classes.....	21
Vocational Classes.....	36
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	917

### METHODS EMPLOYED.

For the accomplishment of the above aims :

1. A practical cabinet maker was employed as instructor in the shop.
2. The machines and benches were arranged as they are in commercial shops.
3. The pupils worked on a commercial product, i. e., chairs, tables and bookcases which were manufactured in lots of 12, 24 or 48.
4. The principle of division of labor was recognized.
5. All book work given related directly to the shop work or to the boy's future needs as a citizen.
6. The school day was lengthened and all preparation of lessons was done in the school under supervision.
7. Male instructors only were employed.

### EXTENSIONS.

The following extensions have been made to date :

In February, 1909, the Rochester Shop School was enlarged by the addition of a Department of Electricity. The faculty was increased to 4 and the enrolment to 80.

In September, 1909, shop classes were organized at Washington School, No. 26, with one department (*Cabinet Making*), two instructors and 40 pupils.

In February, 1910, the Rochester Shop School was again enlarged by the addition of Departments of Carpentry and Plumbing, the number of instructors increased to 7 and the enrolment to 100.

In September, 1911, the Rochester Shop School was moved to building No. 8 in Exposition Park, which has a floor area of 27,500 square feet and which is well adapted to the needs of a technical school.

In February, 1912, the Rochester Shop School was further enlarged by the addition of the Departments of Printing and Gas Engine work, the number of instructors increased to 12 and the enrolment to 150. Owing to lack of proper facilities the latter department has been discontinued.

In February, 1912, ungraded shop classes for retarded pupils were organized at Monroe School, No. 15, with two instructors and 35 pupils. The work in this center is general in character, the boys doing bench work in wood, cobbling and work with willow and reed.

In November, 1912, an ungraded shop class was organized at Oakman School, No. 20, with one instructor and 18 pupils.

In December, 1912, an ungraded shop class was organized at Concord School, No. 18, with one instructor and 18 pupils.

The present Advisory Committee is: R. N. Chapman, Edward F. Davison, Harry J. Bareham, Frederick S. Miller and Miss Musette H. McCord.

#### RESULTS OF FOUR YEARS EXPERIENCE.

The experience of the past four years has seemed to demonstrate :

1. That shop classes will attract and hold in school a number of boys who would otherwise leave and go to work.

2. That many pupils who dislike book work and have made little progress in the regular grades "find themselves" and make rapid progress in the shop classes.

3. That the most interesting subject in the curriculum is the shop work.

4. That the preparation of all lessons in school under the teacher's direction more than outweighs any disadvantages of long hours.

5. That pupils who have attended the Rochester Shop School have secured better positions and are earning better wages than boys who went directly from the Grammar School to work.

6. That book work correlated with shop work is much more interesting than when unrelated.

7. That an eight hour school day is not too long for boys fourteen years old.

8. That a summer session is not justified because:

- (a) The older boys find it necessary to work during the summer months.

- (b) The younger boys may have shop work in the elementary vacation schools.

9. That pupils upon entering vocational schools should be given a "general" or "try out" course to discover their aptitudes.

10. That 80 per cent. of the pupils who would be benefited by vocational courses do not enter them because of:

- (a) Economic pressure in the family.

- (b) Parents' ambitions to prepare them for vocations in which there is no manual labor.

- (c) Lack of knowledge on the part of parents and pupils regarding the advantages offered.

(d) Lack of knowledge on the part of parents and pupils regarding industrial conditions in Rochester and the training needed for advancement in certain vocations.

11. That no external incentives, i. e., rewards or the giving to the pupils of the product, are necessary to hold the pupil's interest.

12. That the strongest incentives to good work are pride in good craftsmanship and the desire to render a service to the school.

13. That a school which prepares for the skilled trades should not graduate pupils before they are 18 years of age. (*See Table 2.*) (Note the small number of boys (14-16) in Rochester manufacturies; also the fact that 80 per cent of them are in the highly specialized industries).

TABLE 2.

SHOWING THE NUMBER OF MEN AND BOYS EMPLOYED IN THE  
PRINCIPAL MANUFACTURIES OF ROCHESTER.

(From Factory Inspector's Report).

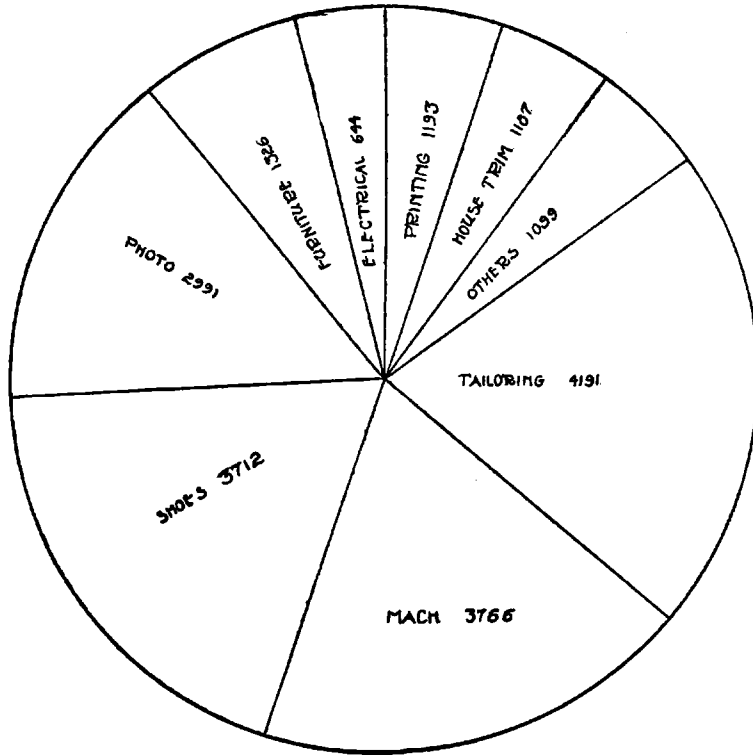
	Men aged 18+	Youths 16-18	Boys 14-16
In factories producing—			
Bottles and jars.....	250	18	2
Sheet metal work.....	977	11	3
Unclassified metal goods.....	252	12	10
Hardware.....	239	7	3
Machinery.....	2298	0	1
Telephone and fire alarm apparatus.....	571	9	0
Motors and electrical supplies.....	73	4	0
Scientific instruments.....	310	15	9
Optical and photo. apparatus.....	2681	257	41
Lamps and stereopticons.....	439	34	8
House trim.....	1187	0	1
Packing boxes.....	291	11	4
Boots and shoes.....	3712	198	101
Printing.....	995	30	19
Bookbinding.....	198	10	6
Tailoring.....	4191	46	44
Cigars.....	167	3	8
Furniture.....	1326	23	4

14. That the cost of maintenance of shop schools would be almost prohibitive were it not for the productive work done by the pupils.

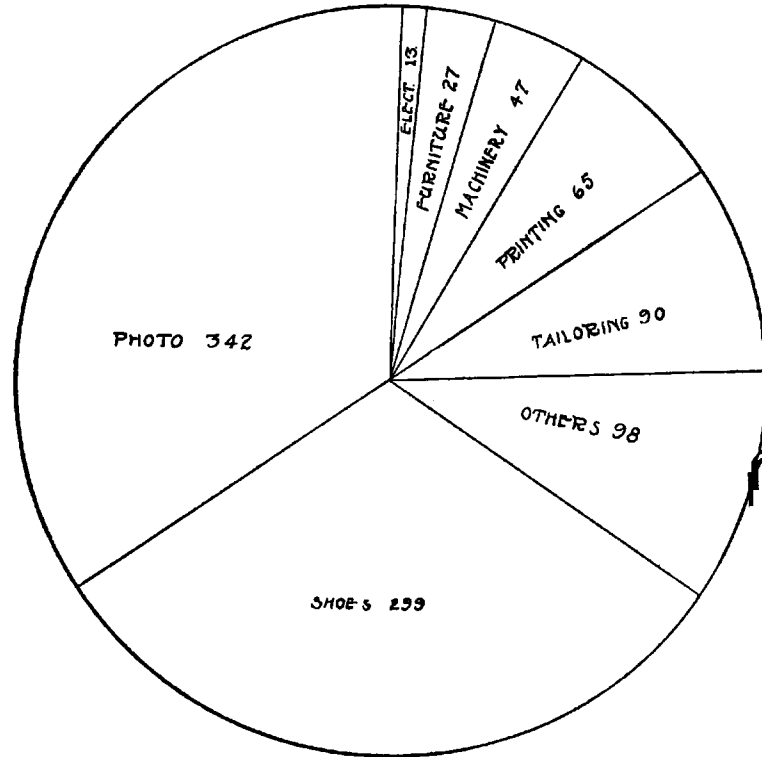
FIGURE 2

(8)

MEN



BOYS





15. That it is practicable to have the pupils of the Electrical, Plumbing and Carpentry Departments undertake installation and repair work, outside of the school, *provided the work is constantly supervised by an instructor.*

16. That it is not practicable for the teachers of the school to supervise the outside work. Separate "outside" or "maintenance" instructors should be employed.

# PRODUCTIVE WORK OF THE PUPILS OF THE ROCHESTER SHOP SCHOOL, 1912.

## (a) Cabinet Department (97 Jobs Completed).

40 flag standards	102 drawing tables
24 flat top desks	12 wiring boards
20 manual training benches	10 chairs
64 T squares	6 bulletin boards
12 saw horses	Stock for aeroplanes
42 bench tops	Stock for Manual Training Department
60 bench stops	1 music stand
Preparing 1500 feet of stock for Carpentry Department	1 Directors' table
6 bookcases	18 sewing boxes
2 filing cabinets	500 cord adjusters
10 work tables	1 battery shelf

## (b) Carpentry Department (74 Jobs Completed).

4 settees built for Grammar Schools	Tool house on Athletic Field of West High School
2000 square feet of flooring laid	15 doors in R. S. S., No. 18 School and No. 8 School
3000 square feet of partitions built	1 key board
8 transoms put in	1 bulletin board
16 air diverters built	12 racks for girls' gymnasium at West High School
16 cupboards built	
5 wiring boards constructed	

(c) Electrical Department (158 Jobs Completed).

46 jobs repairing fire gongs in schools	Connecting stereopticons
27 jobs repairing annunciator systems	Installing desk lamps
Installing intercommunicating telephone system	Installing footlights
Installing buzzers	Installing motors
16 jobs installing lighting systems	Installing 3600 feet No. 12 wire in R. S. S.
	Installing 1600 feet No. 16 wire in R. S. S.
	Installing 276 lamps in R. S. S.

(d) Plumbing Department (24 Jobs Completed).

13 schools supplied with bubbler fountains	Installing 5 sinks in R. S. S.
5 fountains repaired	Gas pipe run for solder furnaces
4 toilets repaired	Installation of all water pipes and waste pipes in R. S. S.
Installing 10 toilets in R. S. S.	

(e) Printing Department (265 Jobs Completed).

31 jobs printing envelopes (42,600 impressions)	5 jobs recipes (150 sets each)
17 jobs letter heads (31,000)	3 songs (3800)
7 jobs note heads (4,000)	8 circular letters (10,500)
9 jobs booklets (95,000)	5 post cards (5,000)
33 jobs cards (86,100)	118 miscellaneous
29 jobs small record sheets (130,000)	

(f) Gas Engine Department (42 Jobs Completed).

42 plant boxes	3 special keys for gates
62 wire forks	Making and placing guards on jointers
84 angle irons	Special work on school machinery
3 special wrenches	
350 table top fasteners	
3 collars for emery wheels	

PRODUCTIVE WORK OF THE PUPILS OF WASHINGTON SHOP SCHOOL  
(No. 26), 1912 (239 JOBS COMPLETED).

11 cases and cabinets	48 book stalls
69 pieces of furniture repaired or refinished	6 costumers
15 magazine stands	11 hektographs
97 foot stools	18 sewing boxes
	18 millinery standards

**PRODUCTIVE WORK OF THE PUPILS OF MONROE SHOP SCHOOL**  
(No. 15), 1912 (40 JOBS COMPLETED).

Caning of chairs	Building of benches, doors, frames
Repairing school furniture	and tool boards
Making of cabinets	Printing of lists, blanks and tags
	(2750 impressions)

The records of boys who leave school at the age of 14-16 are now being investigated and the results tabulated. These results show that a large majority of such boys are engaged in employments which offer little advancement. (*See Table 3.*)

**TABLE 3.**

**POSITIONS SECURED BY BOYS WHO LEAVE THE GRAMMAR SCHOOLS**  
**AT THE AGE OF 14-16.**

Factory workers.....	307
Messenger boys.....	171
Driver or bundle boys.....	80
Clerks.....	38
Check boys.....	36
Tinsmith's apprentices.....	9
Newsboys.....	8
Printer's apprentices.....	7
Elevator boys.....	5
Automobile repairers.....	4
Carpenter's apprentices.....	4
Florists.....	4
Baker's apprentices.....	2
Plumber's apprentices.....	2
Bookbinder's apprentices.....	2
Painter's apprentices.....	2
Miscellaneous.....	15
	<hr/>
	696
Average wage (weekly).....	\$4.89

During the first year these boys changed positions every 17 weeks.

TABLE 4.

**ENROLMENT AND ATTENDANCE STATEMENT FOR 1912 OF WASHINGTON  
SHOP SCHOOL No. 26, MONROE SHOP SCHOOL No. 15  
AND ROCHESTER SHOP SCHOOL.**

	W. S. S. No. 26	M. S. S. No. 15	R. S. S.
Average number belonging.....	64	28	126
Average attendance.....	57	23	106

TABLE 5.

**FINANCIAL STATEMENT FOR 1912 OF WASHINGTON SHOP SCHOOL,  
No. 26 AND MONROE SHOP SCHOOL, No. 15.**

	W. S. S. No. 26	M. S. S. No. 15
Value of Equipment (1911).....	\$ 641.88	\$ 69.03
New Equipment.....	750.08	223.03
Salaries.....	\$4116.50	\$1435.00
Supplies (Materials).....	1091.38	362.42
General Expenses.....	20.22	1.25
Repairs and Replacements.....	63.87	6.24
Totals.....	<u>\$5291.97</u>	<u>\$1804.91</u>
Credits—		
Material.....	\$232.87	\$45.50
Labor.....	304.31	38.40
Net Totals.....	<u>\$4754.79</u>	<u>\$1721.01</u>

TABLE 6.

(11)

## FINANCIAL STATEMENT OF ROCHESTER SHOP SCHOOL FOR 1912 (10 MONTHS).

Items	Cabinet	Carpentry	Electrical	Plumbing	Printing	Gas Engineering	Total
Capital Acquisition { Building.....							\$3927.06
Equipment.....	\$1341.34	\$ 340.77	\$1328.45	\$ 167.14	\$2224.44	\$ 417.25	5819.39
Operation of School Plant.....	458.22	458.17	458.17	458.17	458.17	458.17	2749.07
Library.....	19.49	19.49	19.50	19.49	19.49	19.49	116.95
Salaries.....	2489.19	2134.19	2453.19	1766.19	1710.19	1490.19	12 043.14
Supplies.....	1729.50	2929.99	3498.25	1105.23	379.21	325.99	9968.17
General Expenses.....	27.95	27.95	27.95	27.95	27.95	27.96	167.71
Repairs and Replacements.....	24.25	24.23	24.23	24.23	24.23	24.23	145.40
Totals.....	4748.60	5594.02	6481.29	3401.26	2619.24	2346.03	25,190.44
Credits { Material.....	1336.10	2762.05	2989.06	915.47	257.72	73.28	8333.68
Labor.....	1613.84	1670.78	2988.16	730.00	398.31	100.00	7501.09
Cash.....				118.72			118.72
Credit Totals.....	2949.94	4432.83	5977.22	1764.19	656.03	173.28	15953.49
Net Totals.....	1798.66	1161.19	504.07	1637.07	1963.21	2172.75	9236.95

FIGURE 6.  
ROCHESTER SHOP SCHOOL  
NET COST.

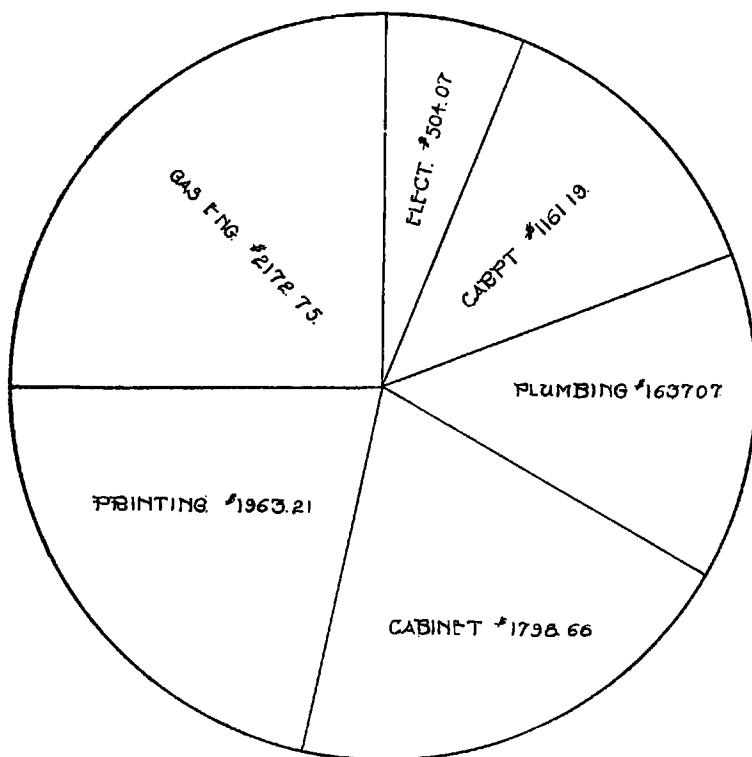
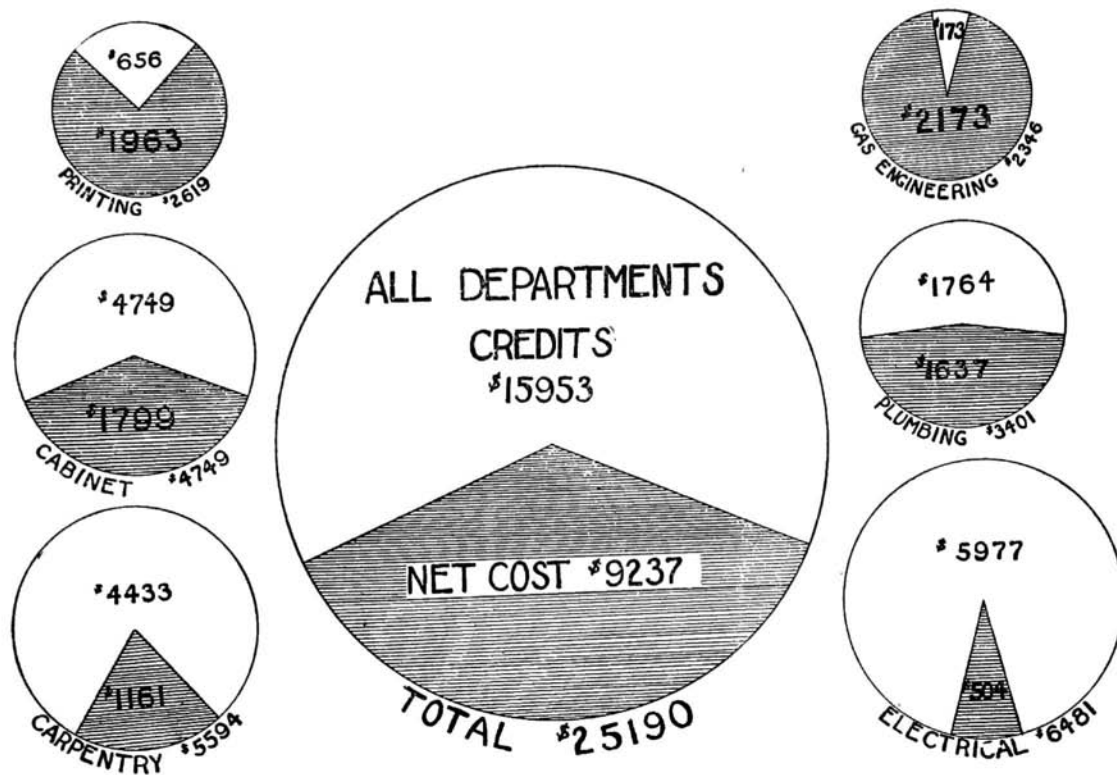


FIGURE 6A  
ROCHESTER SHOP SCHOOL, NET COST AND CREDITS



Since the length of the school day varies as follows:

Rochester Shop School—7 hours (to June, 1912), 8 hours (from September, 1912).

Washington Shop School—6 hours.

Monroe Shop School —6 hours.

Rochester High Schools —4 2-3 hours.

A comparative per capita cost for each 45 minute period is shown.  
(See Table 7.)

TABLE 7.

PER CAPITA COSTS OF THE SHOP SCHOOLS COMPARED WITH THE ROCHESTER HIGH SCHOOLS.

Per capita cost of—	Rochester Shop School	Washington Shop School No. 26	Monroe Shop School No. 15	East High School	West High School
Average number belonging..	\$73.89	\$74.29	\$68.29	\$77.28	\$79.07
Average attendance.....	87.97	83.41	81.69	87.69	86.38
Per capita cost for each 45 minute period.					
Average number belonging..	.39	9.29	8.54	12.88	13.18
Average attendance.....	8.80	10.43	10.21	14.62	14.40

#### IMMEDIATE NEEDS.

The Rochester Shop School needs :

1. A Machine Department to prepare boys for the metal working industries.

2. A Gas Engine Department (for which there is a steadily increasing demand).

3. A Lunch Room. (All boys are now compelled to eat cold lunches brought from home).

4. Laboratories for applied science.

5. More class rooms.

More elementary shop centers are needed:

The N. E. section of the city is provided for by No. 26 School.

The S. E. section of the city is provided for by No. 15 School.

The N. W. section of the city is unprovided for.

The S. W. section of the city is unprovided for



### FUTURE EXTENSIONS.

1. Rochester should have a Technical High School.

1. The city of Buffalo is now constructing a Technical High School costing \$800,000. Syracuse is about to build a Technical High School costing \$500,000.

2. The experience of Cleveland shows that a Technical High School greatly increases High School attendance.

Enrolment in Cleveland High Schools:

For the year 1906-7 the enrolment was 4873.

For the year 1908-9 the enrolment was 4879—an increase of 6 in 3 years.

A Technical High School was built and shortly after a second Technical High School was built.

For the year 1908-9 the enrolment was 4879.

For the year 1912-13 the enrolment was 7850—an increase of nearly 3000 in 4 years.

3. The need of secondary technical education in Rochester is as great as that for classical or commercial education. This is shown by the following straw vote taken in the 8A grades of the Rochester Grammar Schools.

Straw Vote in 8A Grade of Public Schools.

Do you expect to go to High School?

Do you expect to go to College?

If all the following courses were offered in the Rochester High Schools which one do you think you would select?

(1) General or College Preparatory Course?

(2) Commercial Course (to prepare for office positions)?

(3) Technical Course (to prepare for positions in the industries or for Schools of Engineering)?

(Name) .....

(Age) .....

(Date) Nov. 18, 1912.

### RESULT OF THE VOTE.

For General or College Preparatory Course....	33%
For Commercial Course.....	22%
For Technical Course.....	45%
	<hr/>
	100%

Six years ago Commerical Departments were organized in the Rochester High Schools. The enrolment now is 750 or  $\frac{1}{4}$  of the entire High School enrolment.

II. Rochester needs a Vocational Survey to Determine:

1. The vocational opportunities open to pupils leaving school.
2. What advancement each vocation offers.
3. What are the "blind alley" or futureless occupations.
4. What are the health conditions of each vocation.

III. The Rochester Department of Public Instruction should include a Vocational Guidance Bureau.

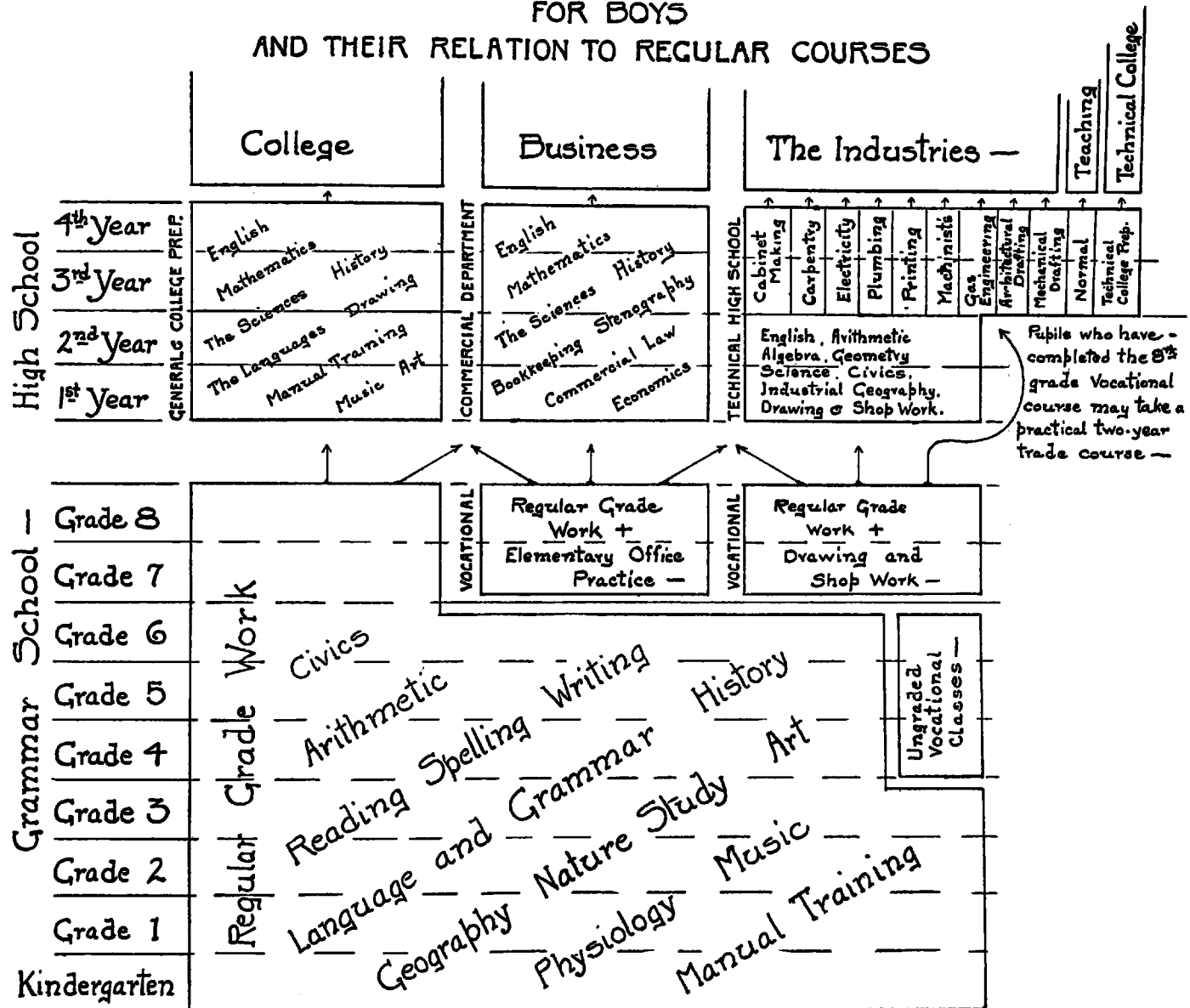
1. To instruct parents and pupils regarding the desirability of various occupations.
2. To determine the natural abilities which are required in each occupation.
3. To determine the training necessary or desirable before entering each vocation.
4. To bring together the employer who has a position to offer and the boy or girl who is fitted for the position.

The following chart shows a proposed organization for the elementary and secondary schools of Rochester.

# VOCATIONAL AND TECHNICAL COURSES

FOR BOYS

AND THEIR RELATION TO REGULAR COURSES



# Vocational Schools for Girls.

ELEANOR D. TOAZ.

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## HISTORY OF THE BEGINNINGS.

Rochester is one of the few cities in which vocational work for girls has kept pace with that for boys. As soon as the work for the boys had been started plans were made to provide for the girls.

Accordingly, in September, 1909, a Vocational Class of eleven girls was organized in Public School No. 6, in one of its grade rooms. The enrolment increased to twenty-two during the semester.

This class was made up of girls fourteen years of age who had completed the 6th grade of the Grammar Schools.

There was one instructor, a woman trained in Domestic Science, and one Course—The Home-Making Course.

This course included all forms of instruction necessary for the keeping of a good comfortable home, the planning of a house, its care, the marketing for and preparation of meals, keeping accounts, laundry work, sewing for the house and family, and hygiene—both in connection with personal health and the care of a home. The cooking lessons were given in the cooking room of the school, which was also used as one of the cooking centers of the city.

The Home-Making Course alone did not seem to meet the demand of the girls. Many of them were anxious for instruction along lines that would prepare them to enter either the dressmaking or millinery trade.

## EXTENSIONS OF THE FIRST VOCATIONAL SCHOOL FOR GIRLS.

In February, 1910, another course was added, dressmaking and millinery. The faculty was increased by two teachers, one a grade teacher for the book subjects and design, the other a technically trained dressmaker to teach sewing, millinery and dressmaking.

Sewing equipment, consisting of two sewing machines and sewing ables, was installed.

A little later another room was fitted up for a model flat. This

included a living room, bedroom and kitchen. The girls were given their housekeeping instructions in these rooms as far as possible.

During this second semester twenty-seven additional pupils reported, making a total of 49 for the school year.

In September, 1910, the vocational work for girls was re-organized and became a separate school called The School of Domestic Science and Art. The school was moved to Public School No. 2, the entire upper floor of the building having been remodeled for the use of the girls. A primary school still occupied the first floor. The new quarters included a fully equipped Domestic Science kitchen and a dining room for serving lunches. The model flat had to be given up on account of lack of room. The millinery room was made a separate department, and a special teacher of millinery was added to the faculty. The enrolment was increased to fifty-eight.

In February, 1911, a teacher for academic work and sewing was added to the faculty, making five teachers in all. The enrolment was 76.

During the summer of 1911, No. 2 School was further remodeled and the entire school given over to the vocational work. The school was named MADISON PARK VOCATIONAL SCHOOL. In September, 1911, the Design Department was made a separate department, the teacher of that subject being made teacher-in-charge of the school. The faculty was further increased to six teachers and the enrolment to 100.

In February, 1912, the faculty was increased to eight teachers, one being employed part time to teach plain sewing. The enrolment was 134.

#### STATE REGULATIONS—SCHOOL SESSIONS.

When the school opened in September, 1910, it was organized according to the State Regulations for Vocational Schools. The day was lengthened to six hours, the sessions being from 9:00 to 12:00 A. M., and 12:30 to 3:30 P. M. In September, 1912, the day was further lengthened to seven hours, the sessions being from 8:30 to 12:00 A. M., and 12:30 to 4:00 P. M.

All lessons were prepared in school under the direction of the teachers. The proportion of book work to hand work was  $\frac{1}{12}$  to  $\frac{5}{12}$ , and as far as possible was correlated with the hand work.

The work in the advanced classes in dressmaking and millinery was carried on as in dressmaking or millinery shops.

In September, 1912, Miss Musette McCord was appointed a member of the Advisory Committee. Miss McCord is the first woman to be appointed on this committee.

#### AIMS.

The aims of the Vocational School were:

First. To hold in school those girls who were leaving from the 6th, 7th and 8th grades to go to work, as soon as they were able to comply with the law in regard to obtaining work certificates.

Second. To give these girls an opportunity to try themselves out in the handiwork lines, viz., plain sewing, dressmaking, millinery, cooking and design—lines that lead toward a trade, so that finding themselves fitted they would have the desire to further develop themselves along a specific line. These girls being immature and lacking education not only in the regular school branches, but in hand work, were not prepared to do any work requiring skill, nor were they able to take positions that would give them a chance for advancement.

Third. To give girls who were not intending to go to High School some training that would lay a foundation for a trade or prepare them to be good home-makers.

#### DESCRIPTION OF MADISON PARK VOCATIONAL SCHOOL.

This school is now housed in an eight room building well adapted for the work that is now being done. The park near by gives opportunity for outdoor games and during pleasant weather for the few minutes in the open air that are required in the middle of each session. The school is easy of access to cars.

There are two departments—Elementary and Advanced. The Advanced Department is made up of girls of high school grade. For these girls the school offers definite two-year courses in dressmaking, millinery, lunch room management and household arts. The work of the first year is general for all. Each pupil has plain sewing, millinery, cooking, design, academic work, biology, physical training and music. At the end of the first year each girl chooses the course in which she wishes to specialize, the greater part of the time in the second year being given to the major subject with the exception of the Household Arts Course, which is a general home training course.

### DRESSMAKING.

The Dressmaking Course is planned to train girls to become efficient workers in dressmakers' shops and to make garments at home. This course includes a systematic and thorough training in all sewing work, including hand sewing, machine work, the making of undergarments, cotton dresses and wool dresses; and work with silk, velvet and the finer materials. It also covers all kinds of repair and remodeling, cutting, fitting, working from patterns, drafting patterns, crinoline modeling and draping on the model figure.

The second year girls do a large amount of order work. This order work is found to be necessary in order to give the girls the opportunity to work with a variety of materials which they would not have in making garments for themselves or for the members of the family. Less than half of the work done by the girls is for themselves. At present the school has more order work in the advanced dressmaking than can be handled, and a number of orders have been refused. The advanced work in dressmaking is taught by a trade woman—a dressmaker who has had years of experience in shop work and in handling girls in the shops. She understands fully the needs of the trade and is preparing the girls toward that end.

### MILLINERY.

The Millinery Course aims to prepare girls to become tasteful milliners with not only a knowledge of millinery work, but a knowledge of the harmony and fitness of head wear. This course includes the practice of stitches used in millinery, the making of hat frames for both winter and summer hats, repairing and remodeling, the freshening and using of old materials, and the making and trimming of all kinds of hats and bonnets, baby bonnets, and mourning hats. The teacher is a trade woman who has had experience in millinery shops and has conducted a millinery shop of her own.

### DOMESTIC SCIENCE.

The Domestic Science includes a regular course for all girls, and a special line of work for those girls who select the Lunch Room Management Course. The foods cooked are used for the girls' lunches, the teachers' lunches, and for sale purposes. The teacher of cooking is not only a trained woman, but a practical cook and has been a teacher in Miss Farmer's School in Boston. The girls bring from home part

of their lunch and supplement with dishes cooked in the school. These lunches are planned to have the correct food balance and the girls are taught the underlying science.

The work of the Lunch Room Management girls is the preparation of the lunch for the teachers and the public. These lunches are prepared entirely by the girls. This includes the marketing for, the preparation and serving. They keep the housekeeping accounts and must keep within a certain limit in planning and purchasing for the lunches. The price of the lunch is 15 cents. This work is of inestimable value in preparing the girls, not only for lunch room work but for the home. The aim of the lunch work is to teach the girls how to plan for good and economical meals. The kitchen is self-supporting as far as materials, cleaning, dishwashing, etc., are concerned.

During the past year there have been a number of cooked food sales and a quantity of such foods as cookies, cakes, marmalades, salads, Boston brown bread, Boston baked beans and simple desserts has been prepared by the girls for orders given to the school. The Supervisor of Domestic Science has closely co-operated with this Department, and to her is due great credit for whatever success the work has had.

#### TEACHERS' LUNCHEONS FOR ONE WEEK.

##### MONDAY.

Swedish Meat Balls	Scalloped Potatoes
Grape Fruit Salad	Sandwiches
Coffee Souffle	
Tea	

##### TUESDAY.

Napolia Spaghetti	Sandwiches
Jellied Vegetables	
Fruit Tapioca	
Tea	

##### WEDNESDAY.

Vegetable Soup	
Boston Baked Beans	Boston Brown Bread
Dressed Lettuce	
Snow Pudding	
Tea	



**THURSDAY.**

Celery Soup		
Rice with Cheese	Bread	Butter
Lettuce with Columbia Dressing		
Jellied Prunes		
Cocoa	Tea	

**FRIDAY.**

Scalloped Salmon	Lettuce Sandwiches
Spanish Cream	
Coffee	

**LUNCHEON DISHES FOR THE PUPILS (ONE WEEK).**

**MONDAY.**

Hamburg Steak.....	\$ .03
Creamed Potatoes.....	.02
Cocoa.....	.02

**TUESDAY.**

Napolia Spaghetti.....	\$ .03
Apple Tapioca.....	.03
Cocoa.....	.02

**WEDNESDAY.**

Boston Baked Beans.....	.03
Boston Brown Bread	
(2 slices with butter).....	.01
Cocoa.....	.02

**THURSDAY.**

Celery Soup, with crackers.....	\$ .03
Caramel Pudding.....	.03
Cocoa.....	.02

**FRIDAY.**

Potato Soup, with crackers.....	\$ .03
Orange Jelly.....	.03
Cocoa.....	.02

## DESIGN.

Design and art work include the study of color harmony and its application, principles of design and application, sketching from models and application to garments, original designing of garments and hats, and the working out of designs for embroidery and braiding. In connection with the teaching of the drawing of the outlines of the head and figure, much time is given to the study of suitable shapes of hats and styles of gowns for the different types of faces and figures. In every way that is possible, the design is closely allied with the work in sewing, dressmaking and millinery. Artists are not trained, but some girls find that this is the work for which they are adapted.

## TEXTILES.

The study of textiles is carried on in connection with the materials used in millinery and dressmaking. The four textiles, cotton, wool, silk and linen are studied in their geographical, historical and commercial relations. The production, manufacture, consumption and transportation of each is taken up and a study of qualities and values is made from actual samples.

## MADISON PARK VOCATIONAL SCHOOL—COURSE OF STUDY ADVANCED DEPARTMENT.

### (FIRST YEAR GENERAL.)

	Hours per Week (60 minute each)
English.....	4
Applied Mathematics.....	4
Applied Design.....	4
Industrial Geography and Civics.....	3
Physical Training.....	1½
Sewing.....	8
Cooking.....	4
Biology.....	4
Music.....	1½
Study.....	3
Total.....	35 hrs.

At the end of the first year pupils will choose one of the following second year courses:

The advanced department is open to girls who have completed the work of the 8th Grade "A" of the Grammar School.

# SECOND YEAR.

## DRESSMAKING.

	Hours per Week
English.....	4
General Science.....	4
Cooking.....	3
Costume Design.....	3
Dressmaking.....	15
Textiles.....	2
Physical Training.....	1½
Music.....	1½
Study.....	3

## LUNCH ROOM MANAGEMENT.

English.....	4
General Science.....	4
Sewing.....	3
Applied Design.....	3
Cooking.....	15
Foods.....	2
Physical Training.....	1½
Music.....	1½
Study.....	3

## MILLINERY.

	Hours per Week
English.....	4
General Science.....	4
Cooking.....	3
Applied Design.....	3
Millinery.....	15
Textiles.....	2
Physical Training.....	1½
Music.....	1½
Study.....	3

## HOUSEHOLD ARTS.

English.....	4
General Science.....	4
Cooking.....	4
Household Decoration.....	4
Sewing or Millinery.....	8
Textiles or Foods.....	2
Physical Training.....	1½
Music.....	1½
Household Economics.....	4
Study.....	4

# ELEMENTARY DEPARTMENT.

	Hours per Week
Arithmetic.....	4
Writing and Physiology.....	2
Language and Grammar.....	4
Geography, History and Civics.....	3
Reading and Spelling.....	3
Drawing.....	3½
Music.....	1½
Physical Training.....	1½
Sewing.....	8
Cooking.....	3½
Study.....	3

Total..... 35 hrs.

The Elementary department is open to girls 14 years of age who have completed the 6th Grade A.

Girls who have been promoted from the 6th A Grade can complete this course in two years and receive a Grammar School Diploma.

Girls who have been promoted from the 7th A Grade can complete this course in one year and receive a Grammar School Diploma.

#### NOTES.

I. The Dressmaking, Millinery and Lunch Room Management Courses are designed for those girls who wish to enter any of those vocations.

II. The Household Arts Course is planned for those girls who wish only to fit themselves for the home.

III. Full credit will be given pupils for work completed in the Advanced Department if they wish at any time to enter one of the High Schools.

IV. Full credit will be given in the Advanced Department for all work completed in the Elementary Department.

V. The School Sessions are from 8:30 A. M. to 4:00 P. M. including thirty minutes for lunch.

#### CO-OPERATION OF THE HIGH SCHOOLS.

Since a majority of the pupils in the Madison Park Vocational School are now of High School grade, it was found necessary to give advanced academic work. This called for a study of the sciences that are needed for an intelligent knowledge of the materials that are used in the home, and of the construction, ventilation and care of the home. As this school has no laboratories, arrangements were made to have pupils take their science work at the High Schools.

#### CHEMISTRY.

Accordingly, in September, 1912, a class of 18 girls was sent to the East High School, two afternoons a week, for Household Chemistry. The subject was taught by the High School teacher of chemistry. The aim is to train the girls to be intelligent homemakers and to give broader knowledge in regard to materials used in millinery and dressmaking. The principles of inorganic chemistry are developed from the study of common substances such as matches, baking soda, sweet and sour milk, etc. A study is made of the composition of the atmosphere,

the effects of good air and bad air, leading up to methods of ventilation. Under textiles are taken up the different kinds of fibres, effects of acids and bases, bleaching and removal of stains. In connection with laundry work, soaps are made and tested and experiments of the uses of blueing are made.

The results of the term's work show improvement on the part of the girls in regard to more careful observation, greater independence and greater interest in household affairs.

### BIOLOGY.

At the present time a class of the first year girls of High School grade are taking, at the West High School, a course in biology. The outline for this work is tentative, but is planned to cover proper respiration, evil effects of improper respiration, posture of body, need of muscular exercise, digestive organs and proper foods, animal and plant cellular structure, the effects of spread of bacteria and the prevention of evil effects, personal hygiene, plant germination and sex hygiene.

### OTHER VOCATIONAL SCHOOLS.

In February, 1912, a Vocational Department for girls was organized in the Washington Vocational School, No. 26, with a faculty of four teachers, one for grade work and design, one for dressmaking, one for plain sewing, and a cooking teacher for part time. In September, 1912, the cooking teacher was employed full time and the work of preparing lunches for the entire faculty of Washington School, numbering about fifty teachers in all, was turned over to the cooking classes of the Vocational Department. This work has proven a great success and is giving the girls the opportunity of cooking in family quantities and of being trained in planning for and in the preparation of a great variety of meals.

Following is an outline of the Course of Study:

Open to girls 14 years of age (or nearly 14) who have been promoted from the 6th A Grade.

	Minutes per Week
Reading .....	100
Arithmetic .....	220
Spelling .....	75
Writing .....	75
Language and Grammar .....	250
Industrial Geography, History and Civics .....	150
Nature Study, Physiology and Hygiene .....	85
Music .....	30
Design .....	210
Sewing .....	360
Cooking .....	180
Physical Training .....	65
Total .....	1,800

Girls who have been promoted from the 6th A Grade can complete the above course in two years and receive a grammar school diploma.

Girls who have been promoted from the 7th A Grade can complete the course in one year and receive a grammar school diploma.

In February, 1912, an ungraded Vocational Class for retarded girls was organized in Washington Vocational School with one teacher and sixteen pupils. The work in this department is general in character, including sewing, cooking, housekeeping and grade work. A large amount of housekeeping work is given these girls and many of them have been prepared to go out in homes. A two year course is planned in which, during the last five months, girls may have the opportunity of working in homes that are carefully selected, during part of the day, and of attending school the remaining part. A beginning has been made along this line and it has proven to be very satisfactory in that in some cases the girls have obtained a permanent and good home in which to work.

In November, 1912, an ungraded Vocational Class was organized at Henry Lomb School, No. 20, with one teacher and sixteen pupils. The work is somewhat similar to that of the ungraded class at No. 26.

In December, 1912, an ungraded Vocational Class was organized at Concord School, No. 18, with one teacher and sixteen pupils. In connection with their cooking and housekeeping lessons, the girls of this class prepare and serve penny lunches to the pupils of No. 18

School. Some days as many as ninety children are served. The lunch consists of cocoa, milk with crackers and sometimes soup or rice. The cost of the food is covered by the two cents which each child pays for his lunch.

#### CO-OPERATION OF THE HAKE'S SCHOOL ASSOCIATION.

The members of this Association have paid the car-fare of needy girls in both the Madison Park and Washington Vocational Schools, during the past two and one-half years.

Too much credit cannot be given this Association of young women for the good that is being done, because without doubt, by their financial aid, many girls have been given the opportunity to stay in school and get the kind of work most helpful to them for their future.

The total number of car fares paid to date has amounted to \$120.00.

#### ENROLMENT AND ATTENDANCE FOR 1912, MADISON PARK VOCATIONAL SCHOOL AND WASHINGTON VOCATIONAL SCHOOL.

	Madison Park Voc. School	Washington Voc. School
Average number belonging.....	99	71
Average daily attendance.....	82	60

#### ENROLMENT—FEBRUARY, 1913.

Madison Park Vocational School.....	85
Washington Vocational School.....	71
No. 20 Ungraded Vocational Class.....	15
No. 18 Ungraded Vocational Class.....	16
Total.....	<hr/> 187

# FINANCIAL STATEMENT OF MADISON PARK VOCATIONAL SCHOOL FOR 1912.

	Dress.	Mill.	Cook.	General	Total
New Equipment. . . . .	\$ 166.72	\$ 21.80	\$ 34.59	\$393.48	\$616.59
Operation of School					
Plant. . . . .	\$ 250.17	\$ 250.17	\$ 250.17	\$ 250.17	\$1,000.68
Library. . . . .	10.77	10.78	10.77	10.78	43.10
Salaries. . . . .	2,417.50	801.25	845.00	2,204.75	6,268.50
Supplies. . . . .	280.33	96.40	56.07	68.40	501.20
General Expenses. . .	3.31	3.32	3.31	3.31	13.25
Repairs and Replace- ments. . . . .	1.16	1.16	1.16	1.16	4.64
Totals. . . . .	\$2,963.24	\$1,163.08	\$1,166.48	\$2,538.57	\$7,831.37
CREDITS.					
Cash. . . . . {					
Material and labor } . . . . .	175.37	65.37			240.74
Net Totals. . . . .	\$2,787.87	\$1,097.71	\$1,166.48	\$2,538.57	\$7,590.63

## FINANCIAL STATEMENT OF WASHINGTON VOCATIONAL SCHOOL FOR 1912—(9 months)

New Equipment. . . . .	\$ 184.60	
Salaries. . . . .	\$3,418.25	
Supplies (Materials). . . . .	421.71	
General Expenses. . . . .	6.00	
Repairs and Replacements. . . . .	6.92	
Books. . . . .	62.85	
		\$3,915.73
Credits—Cash. . . . .		150.34
Net Total. . . . .		\$3,765.39

## COMPARATIVE PER CAPITA COST OF VOCATIONAL SCHOOLS AND ROCHESTER HIGH SCHOOLS.

### LENGTH OF SCHOOL DAY.

Madison Park Vocational School. . . . .	6 hours (to June, 1912).
	7 " (from September, 1912.)
Washington Vocational School. . . . .	6 "
Rochester High Schools. . . . .	4 $\frac{2}{3}$ "



Per Capita Cost of	Madison Pk. Vocational School	Washington Vocational School	East High School	West High School
Average number belonging.....	76.67	53.03	77.26	79.07
Average daily Attendance.....	92.57	62.72	87.69	86.38

PER CAPITA COST FOR A 45-MINUTE PERIOD PER YEAR.

Average number belonging.....	8.21	6.63	12.88	13.18
Average daily attendance.....	9.95	7.84	14.52	14.40

THE PROBLEM OF VOCATIONAL EDUCATION FOR GIRLS.

The problem is much more complex than that of the boys. There are two fundamental facts that must be kept in mind: (1) That the natural vocation of girls is the making of a home. Eventually a very large percentage of girls will be managers of households. (2) That between the period of attending school and that of keeping a home a girl is going to work. Statistics show that the average number of years that girls spend in wage earning positions is seven years. There are now in the United States six million women wage earners.

The training for a trade alone, presents difficulties: (1) in that girls of 16-18 enter relatively unskilled industries; (2) the short time spent in wage earning positions; (3) the seasonal nature of vocations ordinarily taught in vocational schools, namely, dressmaking and millinery; (4) the fact that commercial pursuits are more attractive to girls than industrial.

The aim of the Vocational School becomes, therefore, that of giving the girl a knowledge of the household arts to prepare for the fundamental occupation of woman, and in the best possible way to fit her for the shorter wage earning period.

FUTURE NEEDS IN VOCATIONAL EDUCATION FOR GIRLS.

I. There is needed at present in connection with Madison Park Vocational School a simply furnished four-room apartment with bathroom for practice housekeeping. This apartment could also be used for some of the regular cooking lessons.

II. In the near future Madison Park Vocational School should be made an advanced school to which pupils would be promoted from the eighth grades of the Grammar School or from elementary vocational schools and classes.

III. There is an immediate need for three more elementary centers. One section of the city only is provided for by Washington Vocational School, No. 26. These additional centers would give girls in all parts of the city an opportunity for vocational work and would also allow the backward and belated girls to be cared for in schools near their homes.

IV. Many of our girls when leaving school at 14 years become cash girls. With few exceptions this is the end of their education. There seems to be a need for continuation work along lines of salesmanship for these girls. The exceptionally bright girl will of course be advanced and become a saleswoman, but the large majority should have definite training.

The city of Buffalo has recently organized a continuation class of salesmanship in which ninety pupils are registered. Both the school authorities and business men are enthusiastic over the success of this beginning.

V. The need of a Vocational Survey has been pointed out in the Report on Vocational Education for Boys. Such a survey would be equally valuable to the girls of Rochester. It is especially necessary that the facts regarding the opportunities, health conditions and physical requirements in the various occupations open to women should be investigated and made available for parents.



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