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Annual report of the public schools of the city of Madison, Wis.: 1895-96.

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ANNUAL REPORT

OF THE

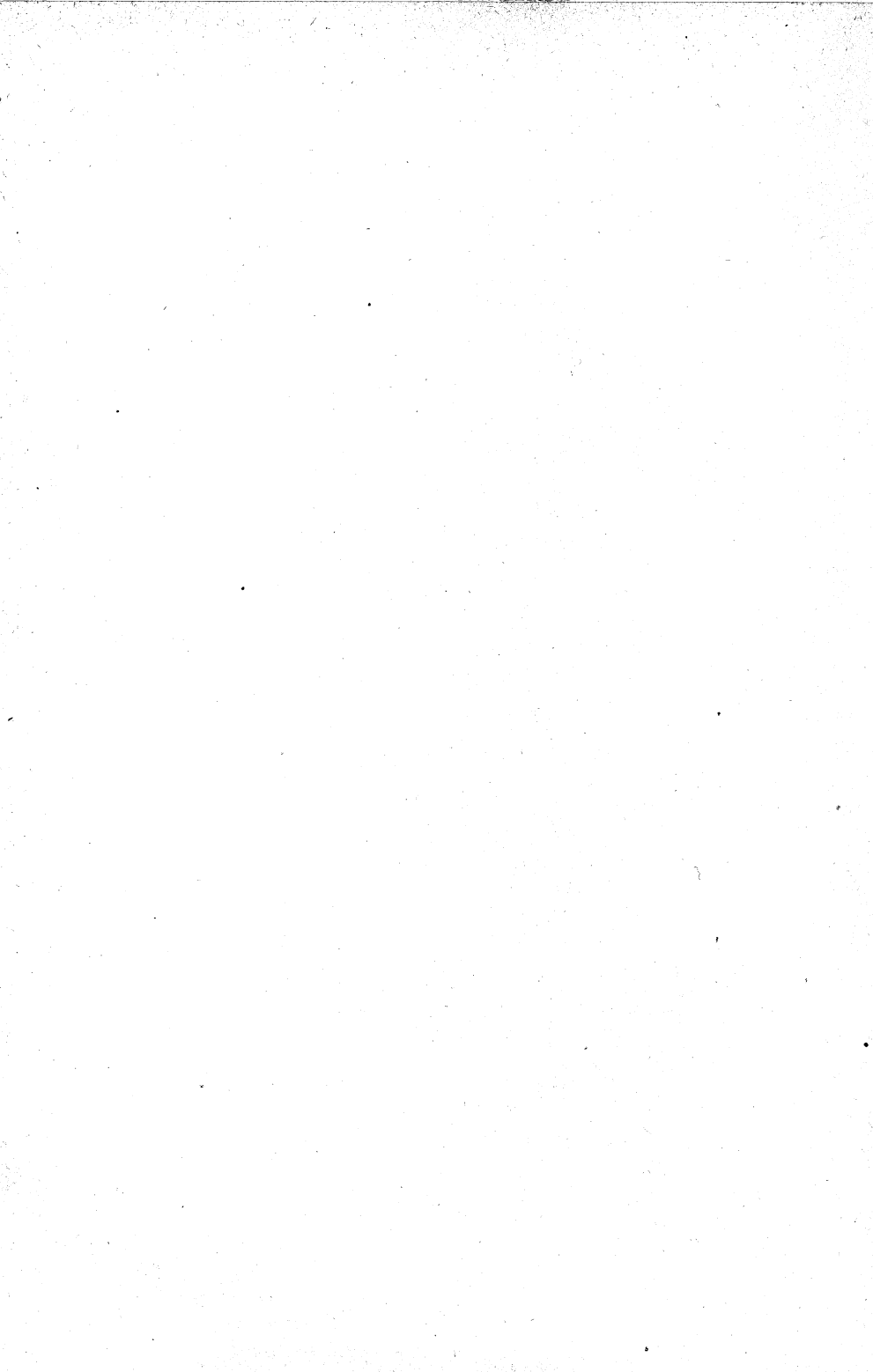
PUBLIC SCHOOLS

OF THE

City of Madison, Wis.

1895-96.

MADISON, WIS.:
DEMOCRAT PRINTING COMPANY, PRINTER.
1896.



BOARD MEETINGS.

Regular Meeting of the Board—First Tuesday of each Month, at 7:30 P. M., Room 7, High School Building.

SUPERINTENDENT.

Office of Superintendent—Room 7, High School Building. Office Hours, from 8 to 9 A. M.

SCHOOL SESSIONS.

High School—From 8:45 A. M. to 12:15 P. M., and from 2 to 4 P. M.

Ward Schools—From 8:45 A. M. to 12:15 P. M., and from 2 to 4 P. M.

Greenbush—From 9 A. M. to 12 M., and from 1:30 to

3:30 P. M. Northeast School—From 9 A. M.

to 12 M., and from 1 to 3:30 P. M.

SCHOOL CALENDAR — 1896-97.

FALL TERM—

Opens Monday, September 7, and closes Friday, December 18.

WINTER TERM—

Opens Monday, January 4, and closes Friday, March 26.

SPRING TERM—

Opens Monday, April 5, and closes Friday, June 11.

Board of Education.

1896.

OFFICERS.

J. W. STEARNS.....	President.
O. S. NORSMAN	Clerk.
M. R. DOYON	Treasurer.
R. B. DUDGEON.....	Superintendent.

MEMBERS.

		Term Expires.
M. R. DOYON.....	752 E Gorham.....	1896
JAMES CONKLIN.....	310 N. Brooks.....	1896
J. W. STEARNS.....	522 Wisconsin Ave.....	1897
O. S. NORSMAN	219 W. Gilman.....	1897
JULIUS G. O. ZEHNTER	11 S. Hancock.....	1898
W. R. BAGLEY	1133 Rutledge.....	1898
MAYOR ALBERT A. DYE.....	930 E. Gorham.....	<i>Ex-Officio.</i>
ALD. G. C. SAYLE.....	220 N. Broom.....	<i>Ex-Officio.</i>

Committees.

STANDING.

Teachers	DOYON, STEARNS, ZEHNTER.
Course of Study	STEARNS, DOYON, CONKLIN.
Finance	ZEHNTER, NORSMAN, DYE.
Supplies	NORSMAN, SAYLE, BAGLEY.
Building	ZEHNTER, DOYON, CONKLIN, DYE, SAYLE.

VISITING.

High School	DOYON, STEARNS.
First Ward	NORSMAN, ZEHNTER.
Second Ward	DOYON, DYE.
Third Ward	SAYLE, ZEHNTER.
Fourth Ward	ZEHNTER, NORSMAN.
Fifth Ward	STEARNS, CONKLIN.
Sixth Ward	DYE, BAGLEY.
N. E. District	SAYLE, BAGLEY.
Greenbush	CONKLIN, SAYLE.

Citizens' Visiting Committees.

PROF. E. A. BIRGE, Chairman.

HIGH SCHOOL.

PROF. E. A. BIRGE.
MRS. A. O. WRIGHT.
MRS. E. G. UPDIKE.
MRS. L. B. SAYLE.
MRS. A. P. WILDER.

GRAMMAR GRADES.

PROF. W. H. ROSENSTENGEL.
MRS. F. G. BROWN.
MRS. F. W. HALL.
MRS. R. G. THWAITES.
MRS. A. C. PARKINSON.

PRIMARY GRADES.

MRS. W. G. PITMAN.
MRS. F. L. PHILLIPS.
MRS. C. S. SLICHTER.
MRS. C. N. BROWN.
MRS. W. H. CHANDLER.

Department of Instruction.

1895-96.

R. B. DUDGEON, 520 Jefferson, Superintendent.

HIGH SCHOOL.

J. H. HUTCHISON.....	1015 W. Johnson.....	Principal.
ANNA B. MOSELEY	120 Langdon.....	Greek, Latin.
WINNIE C. WARNING.....	515 State.....	Algebra, Geometry.
SUE TULLIS	210 N. Hamilton.....	Latin.
LIZZIE B. NOYES.....	514 Lake.....	Algebra, Arithmetic.
MARY MCGOVERN.....	342 W. Mifflin.....	English Literature.
JENNIE HUENKEMIER.....	831 State.....	History.
GRACE E. LEE.....	209 E. Mifflin.....	Natural Sciences.
FLORA C. MOSELEY.....	120 Langdon.....	English.
OLIVE BAKER.....	913 University Ave...	Rhetoricals.
ELSBETH VEERHUSEN.....	605 E. Gorham.....	German.
JULIA E. MURPHY.....	215 Murray.....	History, Civil Gov.
RUTH MARSHALL.....	514 Lake	Phys. Geography.

ALL SCHOOLS.

MARY S. MORSE.....	416 Wisconsin Ave....	Drawing.
JACOB RETTICH.....	109 W. Dayton.....	Physical culture.
NELLIE W. FARNSWORTH...	215 Wisconsin Ave....	Music.

FIRST WARD.

MARY L. EDGAR.....	617 State.....	Second Grammar.
ELIZABETH M. MORSE.....	223 W. Gorham.....	Second Grammar.
KATE H. FEENEY.....	611 Monroe.....	First Grammar.
MARGARET A. FORAN.....	454 W. Main.....	First Grammar.
ELLA HICKOK.....	521 State.....	Second Primary.
IRENE LARKIN.....	107 W. Gorham.....	First Primary.

SECOND WARD.

LAURA K. GRISIM.....	115 E. Johnson.....	Second Grammar.
JESSIE M. BOWERS.....	215 Monona Ave	First Grammar.
ELIZA M. HERFURTH.....	703 E. Gorham.....	Second Primary.
EMMA G. HYLAND.....	141 N. Canal.....	Second Primary.
ANNIE E. GLANVILLE.....	140 E. Gorham.....	Second Primary.
PAULINE W. SHEPARD.....	University Heights...	First Primary.

THIRD WARD.

S. MATILDA BAILEY.....	215 Monona Ave...	Second Grammar.
ANNIE HALLIGAN.....	W. Washington Av.	First Grammar.
RUBY L. GLEASON.....	222 S. Hamilton...	First Grammar.
CAROLINE A. HARPER.....	610 Langdon.....	Second Primary.
EMMA A. NELSON.....	907 E. Gorham.....	Second Primary
JENNIE M. WILLIAMS.....	109 W. Doty.....	First Primary.
ELLA LARKIN.....	107 W. Gorham ...	First Primary.
RICKA HINRICHS.....	104 E. Wilson.....	Kindergarten.
BERTHA KNEY.....	128 E. Johnson....	Kindergarten Ass't.

FOURTH WARD.

THERESE G. COSGROVE	420 W. Washington	Second Grammar.
MARTHA L. CHAMBERLAIN.	109 W. Wilson.....	First Grammar.
MARY E. STORM.....	436 W. Main.....	Second Primary.
ISABEL T. BYRNE.....	446 W. Wilson.....	First Primary.

FIFTH WARD.

GRACE BUSHNELL.....	213 Park.....	Second Grammar.
JENNIE HARNSBERGER.....	1037 University Av.	Second Primary.
EMILY H. DETTLOFF.....	20 E. Wilson	First Primary.
CLARE DENGELER.....	319 Francis.....	First Primary.

SIXTH WARD.

MAGGIE M. MAYERS.....	743 Jenifer	Second Grammar.
MARGRETTA JONES	222 S. Hamilton ...	First Grammar.
ELIZABETH CUTLER.....	123 Mills	First Grammar.
LUCY COSGROVE.....	420 W. Washington	Second Primary.
ALICE KERWIN.....	523 E. Washington	Second Primary.
LEONORE TOTTO	811 Jenifer	First Primary.
LINA G. HOLT	115 S. Canal.....	First Primary.
ANNA LOUISE TYNER.....	316 N. Few	Kindergarten.
MAUD TYNER.....	316 N. Few	Kindergarten Ass't.

NORTHEAST DISTRICT.

HELEN WINTER.....	15 S. Webster	Primary.
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GREENBUSH.

LELIA M. GILE	419 W. Washington	Grammar.
NORA CULLIGAN	314 Clymer.....	Primary.

Department of Instruction.

1896-97.

R. B. DUDGEON, Wingra Park, Superintendent.

HIGH SCHOOL.

J. H. HUTCHISON	1015 W. Johnson ..	Principal.
ANNA B. MOSELEY	120 Langdon	Greek, Latin.
SUE TULLIS	210 N. Hamilton ..	Latin.
MARY MCGOVERN	342 W. Mifflin	English Literature.
GRACE E. LEE	209 E. Mifflin	Natural Sciences. .
FLORA C. MOSELEY	120 Langdon	English.
OLIVE BAKER	640 State	Rhetoricals.
ELSBETH VEERHUSEN	531 State	German.
JULIA E. MURPHY	215 Murray	History, Civil Gov.
RUTH MARSHALL	610 Francis	Physical Geography.
FLORA A. BARNES	313 Charter	Algebra, Arithmetic.
FLORENCE P. ROBINSON ...	228 Langdon	History.
WM. D. TALLMAN	502 W. Mifflin	Algebra, Geometry.

ALL SCHOOLS.

IDA M. CRAVATH	15 E. Wilson	Drawing.
JACOB RETTICH	109 W. Dayton	Physical Culture.
NELLIE W. FARNSWORTH ..	215 Monona Ave ..	Music.

FIRST WARD.

MARY L. EDGAR	617 State	Second Grammar.
ELIZABETH M. MORSE	223 W. Gilman	Second Grammar.
KATE H. FEENEY	611 Monroe	First Grammar.
CHRISTINE BAN LI	531 State	Second Primary.
IRENE LARKIN	107 W. Gorham ...	First Primary.
ELLA LARKIN	107 W. Gorham ...	First Primary.

SECOND WARD.

LAURA K. GRISIM	115 E. Johnson	Second Grammar.
JESSIE M. BOWERS	215 Monona Ave ..	First Grammar.
ELIZA M. HERFURTH	703 E. Gorham	Second Primary.
EMMA G. HYLAND	141 N. Canal	Second Primary.
EDITH A. GLANVILLE	140 E. Gorham	Second Primary.
PAULINE H. SHEPARD	University Heights	First Primary.

THIRD WARD.

S. MATILDA BAILEY.....	215 Monona Ave ..	Second Grammar.
RUBY L. GLEASON	222 S. Hamilton...	First Grammar.
ANNIE HALLIGAN.....	307 Clymer.....	First Grammar.
CAROLINE A. HARPER.....	610 Langdon.....	Second Primary.
EMMA A. NELSON.....	917 E. Gorham....	Second Primary.
JENNIE M. WILLIAMS	109 W. Doty	First Primary.
MARY E. HATCH	108 N. Butler.....	First Primary.
RICKA HINRICHS.....	104 E. Wilson.....	Kindergarten.
BERTHA KNEY.....	128 E. Johnson....	Kindergarten Ass't.

FOURTH WARD.

THERESA G. COSGROVE....	420 W. Washington	Second Grammar.
MARTHA L. CHAMBERLAIN.	109 W. Wilson....	First Grammar.
ELIZABETH C. SMITH.....	145 W. Wilson....	Second Primary.
ISABEL T. BYRNE.....	446 W. Wilson....	First Primary.

FIFTH WARD.

MARGRETTA JONES.....	911 W. Johnson....	Second Grammar.
MARGARET A. FORAN.....	454 W. Main.....	First Grammar.
MARY T. KELLY.....	531 State.....	First Grammar.
BLANCHE S. TUCKER.....	821 State	Second Primary.
EMILY H. DETTLOFF.....	20 E. Wilson.....	First Primary.
CLARE DENGLER.....	319 Francis.....	First Primary.

SIXTH WARD.

VIOLA A. PRESTON.....	820 Spaight.....	Second Grammar.
ELIZABETH CUTLER.....	48 Mills	First Grammar.
MABEL J. LANGDON.....	820 Spaight.....	First Grammar.
LUCY R. COSGROVE.....	420 W. Washington	Second Primary.
ALICE P. KERWIN.....	523 E. Washington	Second Primary.
LINA G. HOLT.....	811 Jenifer.....	First Primary.
GRACE R. POTTER	811 Jenifer.....	First Primary.
EMMA E. CUSICK.....	1138 Spaight.....	First Primary.
ANNA L. TYNER.....	1020 Jenifer.....	Kindergarten.
MAUD TYNER.....	1020 Jenifer.....	Kindergarten Ass't.

NORTHEAST DISTRICT.

HELEN L. WINTER.....	15 S. Webster.....	Primary.
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GREENBUSH.

LELIA M. GILE.....	419 W. Washington	Grammar.
EDNA M. GILBERT.....	Wingra Park.....	Primary.

Janitors.

High School	John Morris.....	815 E. Gorham street.
First Ward.....	John McDonald.....	437 W. Dayton street.
Second Ward.....	Martin Amundson	211 Blair street.
Third Ward.....	Wm. Post.....	16 S. Hancock street.
Fourth Ward.....	Matthew Culligan.....	314 W. Clymer street.
Fifth Ward.....	W. E. Oakey.....	1310 University ave.
Sixth Ward.....	James Thompson.....	508 S. Baldwin street.
Northeast District....	John G. Schultz.....	Atwood avenue.
Greenbush.....	William Storm.....	S. Park street.

Treasurer's Report.

Receipts and Expenditures from July 1, 1895, to June 30, 1896.

RECEIPTS.

1895.	
July 1. Balance on hand.....	\$5,904 00
Dec. 31. Sale of old furniture.....	4 00
R. B. Dudgeon, tuitions collected.....	222 00
State of Wisconsin, state aid to High Schools.....	275 15
1896	
Jan. 20. C. Foster, city treasurer, city and county school tax.....	35,865 52
H. A. Harriman, tuition.....	11 00
Feb. 11. D. R. Butler, tuition.....	11 00
Sale of old desks.....	1 00
J. Q. Brigham, county treasurer, state apportionment.....	4,275 68
June 5. A. Sykes, tuition.....	10 00
20. R. B. Dudgeon, tuitions collected.....	406 00
29. J. W. Pepper, town treasurer, joint district school tax, 1895.....	493 59
30. W. W. Swain, treasurer town of Madison, school tax, 1895.....	905 83
20. J. Q. Brigham, county treasurer, balance state apportionment.....	1,336 19
11. S. A. Peterson, state treasurer, school loan.....	15,000 00
	\$64,720 96

EXPENDITURES.

Certificates of appropriation paid from July 1, 1895, to June 30, 1896.....	\$48,191 22
Balance on hand June 30, 1896.....	16,529 74
	\$64,720 96

M. R. DOYON,
Treasurer of the Board of Education.

Clerk's Statement.

*Of Receipts and Expenditures of the Board of Education of the
City of Madison from July 1st, 1895, to June 30th, 1896.*

RECEIPTS.

Balance on hand July 1st, 1895.....	\$5,904 00
Received from State aid to high school.....	275 15~
State apportionment, school fund.	5,611 87~
City school tax.....	29,970 52~
County school tax.. ..	5,895 00~
Town of Madison, joint dist. school tax.....	905 83
Town of Blooming Grove, joint dist. school tax	493 59
Tuitions collected.....	660 00
Old desks sold.....	5 00
School loan from State of Wis- consin.....	15,000 00

EXPENDITURES.

For Apparatus and library.....	\$222 37 ✓
Janitors and labor.....	2,943 30
Repairs.....	2,062 12
Miscellaneous supplies.....	1,190 67 ✓
Fuel	3,827 42
Furniture.....	760 10 ✓
Clerk's salary, and school census.....	300 00 ✓
Printing.....	236 87 ✓
Filling 6th ward school grounds.....	106 20 ✓
Macadam street improvements, high school, 1st, 4th and 6th ward.....	1,053 60 ✓
Paid Comn. on sale real estate.....	50 00 ✓
Fifth ward addition	3,384 34
Interest on overdrafts.....	118 31 ✓
Free text books.....	392 23 ✓
Salaries supt. and princ. and teachers.....	31,538 69
Balance on hand July 1, 1896.....	16,529 74
Total.....	\$64,720 96 \$64,720 96

Report of the President of the Board of Education.

To the Board of Education, Madison, Wis.

The rapid growth of our city during the last few years has steadily imposed upon the School Board the necessity of providing increased school facilities. In 1893, a four room addition to the third ward school building was erected at an expense of \$14,101.31. The needs of the sixth ward were already pressing, and as the old buildings were unsatisfactory and the site inconvenient, had to be met the following year by the erection of a new eight room building, which cost \$25,935.75. For the lot \$6,200 was paid and from the sale of one lot and building \$2,450 was realized. Thus the net investment was \$32,685.75. It was believed that this building would be adequate to the demands of the ward for some years to come, but already it has been found necessary this year to make use of the old building, which fortunately had not been sold, for the accommodation of the kindergarten. In 1896, the fifth ward building was enlarged by a four room addition, at an expense of \$14,067.13. A new heating plant was also provided for the older portion of the high school building. The expense of these erections has been met by borrowing in accordance with section 6, chapter 244, laws of 1889, which sets apart one tenth of one per cent. of the assessed valuation of the city to be applied to the payment of principal and interest on a loan of forty-five thousand dollars or less that may be made by the Board of Education of the city for building purposes. It will be seen that this resource cannot be resorted to immediately for any further large addition to our school accommodations.

At the same time we are confronted with an overcrowded condition of the high school building which will soon have to be remedied. In 1893 the enrollment in this school was 357; the year following it was 397; in 1895 it was 417, and already at the commencement of this year it has reached 467. Last year the lack of seating accommodations in the assembly room was met by excusing the senior class from the building except at recitation times — an undesirable arrangement on many accounts. This year by adding to and rearranging the desks so as to use all available room, and by seating part of the school in the old assembly room, we have succeeded in supplying accommodations for exactly the present enrollment. It does not seem probable that the increase of enrollment will be smaller next year than it has been this, especially as it has been found necessary this fall to open a new grammar room in order to meet the pressure upon this grade. Thus with our present building there seems to be no way of providing for the seating of the high school as it is likely to be found at the opening of another year. The difficulty with the assembly room is not the only one. The recitation rooms are pressed to their utmost at present and one or two classes ought now to be divided if we had accommodations for a new division. The instruction in music, drawing and elocution is very much hampered by present conditions, and it has been found necessary to discontinue the training in calisthenics.

We have been compelled to open this year a new primary room in the sixth ward, a new primary room in the first ward, and a new grammar room in the fifth ward. The expenses of running the schools are met by the four-tenths of one per cent tax provided for that purpose in the section of law cited above, together with the amounts

annually received from the state. The following statement shows what these have been for the last three years:

Year.	City.	State.	High School.
1893-4.....	\$36,000 00	\$6,220 49	\$282 50
1894-5.....	36,702 52	5,894 40	281 71
1895-6.....	37,264 94	5,611 87	275 15

These funds become available about the first of January. For some years the pressure upon the resources of the Board has been so great as to compel the anticipation of payment in order to meet the expenses of the last three or four months of the year. This pressure is best shown by a statement of the amounts borrowed each year, temporarily, and repaid when the taxes for that year became available. In 1893 there was thus borrowed \$14,828.65; in 1894 the amount was \$15,263.57; in 1895, \$15,729.00. This year it seems probable that the amount will not be far from \$17,000.00. It is thus obvious that despite the most economical administration this amount is increasing from year to year.

It is believed that this statement will make it clear why the Board has felt obliged to be exceedingly conservative about undertaking new responsibilities. For example, the establishment of additional kindergartens has been repeatedly urged upon us. There are at present but two kindergartens under the control of the Board, one in the third and one in the sixth wards. These have been managed in the most economical manner consistent with efficiency, and it is found that, after paying for the outfit, and omitting altogether heating and janitor service, these cost annually \$573.50 each. The value of this form of instruction has been abundantly established by experience, and is confirmed to us by the work of those under our direction. We have no question of the desirability of establishing one

in connection with the public schools in the first and the fifth wards, if there were funds available for sustaining them. In the first ward a free kindergarten is now in operation and has been maintained for the past two years by a kindergarten association, which looks for its adoption by the Board in order that it may extend its own work in other directions. That this has not been adopted is due to the conditions set forth above.

The same conditions make it impossible for the Board to take any steps toward the establishment of manual training in our schools. The action of the State legislature in 1895, encouraging the establishment of such instruction, and providing state aid for it, sufficiently indicates the progress of public opinion on this subject. Massachusetts requires every city of twenty thousand inhabitants or upwards to maintain such a department. As the capital of the state and the seat of the State University it seems especially desirable that Madison should early enter upon this form of educational work, and it is to be hoped that some way may be found before long to escape from the embarrassments which now render it impossible to do so.

It has seemed necessary to explain somewhat in detail the difficulties which attend the administration of our schools. In conclusion it is gratifying to be able to state that the work of our schools was never more efficient and satisfactory than it is at present. We have a corps of experienced and capable teachers, under competent supervision, working harmoniously and in the right spirit for the real development of the children under their charge. The measures which you have taken for the improvement of the force are resulting satisfactorily, and entitle our schools to the full measure of confidence and pride which the public whom they serve is ever generous in bestowing upon them.

J. W. STEARNS,

President of Board.

Superintendent's Report.

To the Board of Education:

GENTLEMEN—I respectfully submit to you my fifth annual report of the public schools of Madison, for the year ending June 30, 1896. This will constitute the forty-first report of the series of annual reports issued by the superintendents of the Madison schools.

Your attention is first called to the usual statistics which may be of some value in affording a knowledge of the schools and of the progress made during the past year:

SUMMARY OF STATISTICS.

CENSUS.	1894-5.	1895-6.
Population of the city of Madison (1895).....		15,950
Number of children of school age in the city:		
First Ward.....	938	928
Second Ward.....	1,070	1,100
Third Ward.....	348	374
Fourth Ward.....	904	883
Fifth Ward.....	760	788
Sixth Ward.....	665	734
Joint School District, N. E.....	44	57
Joint School District, Wingra Park.....	52	57
Total.....	4,781	4,921

ENROLLMENT.

Number of children enrolled in the public schools:		
High School.....	397	417
First Ward.....	237	339
Second Ward.....	260	271
Third Ward.....	405	436
Fourth Ward.....	197	216
Fifth Ward.....	270	219
Sixth Ward.....	444	489
Northeast School.....	32	41
Greenbush.....	87	100
Total.....	2,329	2,528

SUPERINTENDENT'S REPORT.

19

Number of pupils in the different grades:	1894-95.	1895-96.
Kindergarten	135	145
First Grade	329	342
Second Grade	261	329
Third Grade	242	260
Fourth Grade	231	219
Fifth Grade	215	238
Sixth Grade	191	207
Seventh Grade	175	188
Eighth Grade	153	183
First Year, High School	146	167
Second Year, High School	114	111
Third Year, High School	72	79
Fourth Year, High School	65	60
Total	2,329	2,528

ATTENDANCE.

Per cent enrolled	49	51
Average membership	1,994	2,173
Average daily attendance	1,838	2,009
Per cent. of attendance	94	92
Total days of attendance for year	343,699	371,761

BUILDINGS.

Number of buildings occupied	9	9
Number of regular school rooms	38	39
Number of recitation rooms used	13	13
Number of sittings for pupils	2,377	2,437

TEACHERS.

Number in High School	11	12
Number in second grammar grade	6	7
Number in first grammar grade	9	9
Number in second primary grade	10	10
Number in first primary grade	10	11
Teacher of drawing	1	1
Teacher of music	1	1
*Teacher of physical culture	1	1
Kindergarten	2	2
Kindergarten assistants	3	2
Total	54	56

TEACHERS' REPORT.

Times teachers were tardy.....	119	174
Half days' absence.....	284	138
Visits made to parents.....	588	745
Visits made to sick pupils.....	262	424

VISITS TO THE SCHOOLS.

Number by the superintendent.....	253	275
Numbers by members of the Board.....	140	179
Number by parents.....	1,825	2,308
Number by others.....	2,349	2,942

AGE OF PUPILS.

Average age entering High School.....	14 $\frac{5}{7}$ years.
Average age graduating from High School.....	18 $\frac{3}{4}$ years.

STATISTICS.

The enumeration of children of school age in the city at the close of the year gave 2,444 boys and 2,477 girls, making a total school population of 4,921, a gain of 140 over last year.

The entire number of pupils registered in the schools for the year was 2,528, of which number 1,212 were boys and 1,266 girls. This was an increase of 89 boys and 61 girls, a total of 150, over the number registered during the preceding year.

The number registered was 51 per cent of the school population of the city. At first glance it would seem that the per cent of children of school age attending school was small. It must be remembered that the school population includes all children between the ages of 4 and 20 years. Many of these are in the private and parochial schools of the city, while others have completed the work of the public schools and are doing work in the university or are otherwise employed. It should also be remembered that children are not admitted to the schools under six

years of age, except in two wards where they are admitted to the kindergardens at five years. When these facts are considered, it becomes evident that a large per cent of the children of school age in the city, who are expected to attend school, are enrolled during some part of the year.

The average daily attendance during the year was 2,009, against 1,857 for the year before. The school population increased during the year 5.6 per cent, the number enrolled 6.3 per cent and the attendance 8.2 per cent. The fact that the enrollment increased at a greater rate than the school population indicates an increased effectiveness of the public schools in reaching the masses; and the fact that the average attendance increased at a greater rate than the enrollment indicates an increased regularity of attendance.

The number registered in the high school was 417, of which number 201 were boys and 216 were girls. This was an increase of 11 boys and 9 girls, a total of 20, over the number of the preceding year.

The pupils were distributed among the grades as follows: Primary grades 1,295, or 51.2 per cent; grammar grades 816, or 32.3 per cent; high school 417 or 16.5 per cent. The proportion of pupils in the high school is very gratifying and is very much greater than is found in any other system of schools in the country.

The statistics given in the last report of the U. S. Commissioner of Education show that about 20 per cent of the population of the country were in the public schools and in the colleges of the United States. In making this estimate no account is taken of the children attending the private schools below college rank, while all students in institutions, both private and public, doing regular collegiate work, were counted.

Of the whole number attending school in the United

States, as stated above, 97.5 per cent were in the elementary grades receiving instruction such as is given in primary and grammar grades, 2 per cent under secondary instruction in the high schools, and .5 per cent in institutions giving what is generally termed higher instruction.

Of the Madison children in the public schools and the university 80.4 per cent are in the elementary grades, 15.8 per cent in the high school, and 3.8 per cent in the university. This may be better understood perhaps if stated in another form: Of the children of the United States attending school only one out of every fifty-three was in a high school. Of the children of Madison attending school one out of every six is in the high school. This shows that in proportion to the number enrolled in our schools the pupils in the high school outnumber those in the average high school of the country nine to one. Of those attending school in the United States one out of every one hundred seventy-one is in higher institutions of learning. In Madison one out of every twenty-six is in the university, or about seven times the average number. The large proportion of pupils in the high school and in the university is highly gratifying, and leads fairly to the conclusion that the Madison public schools are unusually successful in holding the pupils in the school until the work of the whole course has been completed. It is also very apparent that in our city the spirit in favor of education is strong, and that the citizens are not slow in taking advantage of the unusual opportunities offered for the higher education of our young people.

The regular work of the schools was carried on by fifty-two teachers, thirteen in the high school and thirty-nine in the grades. In addition to these three special teachers were employed to supervise the work in drawing, music,

and physical culture, and two to assist in the kindergartens.

In the grades the average number of pupils for each teacher, based on the enrollment, was fifty-four; based on the average attendance was forty-two. In the high school the number to each teacher, based on the enrollment, was thirty-two; based on the average attendance, was twenty-seven.

COST OF SCHOOLS.

Amounts paid out for the years	1894-95	1895-96
Teachers	\$29,061 60	\$31,538 69
Incidentals.	12,166 14	12,103 59
New buildings and street macadam.....	11,535 75	4,548 94
Old indebtedness	1,000 00
Totals.....	\$53,763 49	\$48,191 22

Cost per per pupil for tuition alone :	1893-94	94-95	95-96
Upon number enrolled.....	\$11 73	\$10 86	\$10 93
Upon average membership.....	13 88	12 68	12 72
Upon average attendance.....	14 98	13 61	13 76

Cost per pupil for supervision :			
Upon number enrolled.....	1 51	1 61	1 54
Upon average membership.....	1 79	1 88	1 79
Upon average attendance.....	1 93	2 02	1 94

Cost per pupil for incidentals :			
Upon number enrolled.....	5 96	5 23	4 79
Upon average membership.....	7 06	6 10	5 57
Upon average attendance.....	7 62	6 54	6 02

Total cost per pupil for tuition, supervision, and incidentals :			
Upon number enrolled.....	19 20	17 70	17 26
Upon average membership.....	22 73	20 66	20 08
Upon average attendance	24 53	22 17	21 72

Total cost per day for each pupil :			
Upon number enrolled114	.095	.093
Upon average membership.....	.121	.112	.108
Upon average attendance132	.119	.119

Cost per pupil in the ward schools for tuition:	1893-94	94-95	95-96
Upon the number enrolled.....	\$9 37	\$8 96	\$8 82
Upon average membership.....	11 09	10 76	10 35
Upon average attendance.....	12 08	11 69	11 27

Cost per pupil in high school for tuition :

Upon number enrolled.....	23 35	21 64	21 64
Upon average membership.....	27 51	22 01	24 07
Upon average attendance.....	28 45	23 16	25 28

Omitting the amounts paid out for new buildings and macadamizing streets, the current expenses of the schools for the year ending June 30, 1895, were \$41,227.74, and for the year ending June 30, 1896, \$43,642.28, an increase of \$2,414.54. This increase has necessarily followed the increase in attendance. It will be observed, however, that the rate of increase of cost has not equaled the rate of increase of attendance.

From the report of the Commissioner of Education for 1892-93, the latest yet accessible, the average cost per capita of pupils in average attendance in the cities of the United States containing over 8,000 inhabitants, for tuition and supervision, was \$18.29; in the cities of the states of the upper Mississippi valley, \$17.95; in the cities of Wisconsin, \$16.63; in the city of Madison, \$15.70.

The total cost per capita for each pupil in average attendance in the cities of the United States, including the amounts paid out for new buildings and permanent improvements, was \$31.92; in the cities of the upper Mississippi valley, \$32.73; in the cities of Wisconsin, \$28.90. The cost per capita in Madison for the same purposes was \$23.98.

These comparisons make it very clear that in Madison the cost per capita for educating the children is materially less than the average cost in the cities of the country.

It is at once apparent that Madison in proportion to her

population pays from ten to twenty per cent less for school purposes than other cities. This fact would be no cause for gratification if economy in expenditure of money meant inferior schools. We believe it can be justly said that the Madison schools rank among the best in the country. To maintain this high standard of efficiency with the limited means at their disposal has taxed the ingenuity and the business tact of every member of the Board of Education. It has been fortunate indeed for the school interests of our city that earnest men have been placed upon the Board of Education who have spared no effort to administer the school affairs with wisdom and economy.

Madison is considered an educational center and her schools should be made the best in the state. The schools must be kept abreast of the times and in touch with the general movement in educational lines. To this end additional funds are needed. The question of furnishing these is forcing itself upon those in charge of municipal affairs. The solution of this question demands the attention of the best business men of our city.

THE WORK OF THE SCHOOLS.

Statistics in a superficial way indicate the progress of the schools but cannot measure the real character of the work. The amount expended for the schools may indicate the attitude of the community towards public education; a carefully outlined course of study may indicate a logical arrangement of subject matter and a clear understanding of educational values; order, regularity, and uniformity may indicate a well organized system, but none of these can indicate in what degree the spirit and character of the children have been influenced by their school life. The school must instruct the children in reading, writing, and

arithmetic, but it would fall far short of its purpose if it fail to train in politeness, order, truthfulness, industry, and love. The school must train for the practical affairs of life, but it must not fail to instruct in the forms and habits of life which fit for the larger social and political duties. "Power to think," says Arnold Tompkins, "to adjust the mind to the realities in the world, to reach true conclusions from carefully discriminated data; strongly developed and refined sensibilities; and an ethical nature fully aroused—these are in the line of a truly practical education. Book-keeping is not the immediate nor the fundamental qualification of a clerk; nor skill in measuring corn-bins and in computing interest the first necessity of a good farmer. In the eternal fitness of things, that which makes a man a man supplies the fundamental necessity of vocations. A clerking man or a farming man is not so serviceable as a man clerking or a man farming."

In view of these high purposes in school work, it becomes evident that teaching is something more than the manipulation of mechanical devices. To tap the bell, call the roll, keep the records, correct the wayward, and enforce order may be school keeping but it is not real teaching. "Teaching is the process by which one mind, from set purpose, produces the life enfolding process in another." In real teaching the mind of the teacher must come in vital touch with the mind of the pupil. If the teacher is to produce the "life-unfolding process" in the pupil he must first have experienced that process himself. There is much truth in the old saying that as the teacher so the school. What the pupil is to know, the teacher must know; what the pupil is to think, the teacher must think; what the pupil is to feel, the teacher must feel; what the pupil is to be, the teacher must be. "The teacher," says

Tompkins, "builds his own thought structure into the mind of the pupil; begets him with his own purity, strength, and sweep of emotional life; breathes into him the breath of his own ethical nature. The teacher who has not a rich and full range of emotional life can expect nothing but a withered soul born of his teaching. The man who has not strength and purity of character cannot strengthen and purify character."

It is only when the teacher really loves the pupil that he can fully appreciate his needs and understand his thought. The teacher must think with the pupil, feel with the pupil, and make the pupil's world his world. "The little flower has whispered to him of the infinite, and he must know what message it has to his blindly craving pupil. The lily has spoken to him its thought, plan, and purpose; its innocence, purity, and beauty; and he feels by sympathy how much the more limited life of his pupil needs such experiences. He has felt the strength, self-sacrifice, and heroism of Socrates, and knowing that his pupil must grow in firmness of virtue, brings Socrates' life into the pupil's experience. The teacher must see to it that the heavens declare the glory of God to the pupil, but they must first have declared it to the teacher. Thus the soul of the objective world is transformed into the life of the pupil through the experience of the teacher." Until we find some standard with which to measure the growth of mental, moral, and spiritual life we will be wholly unable to measure the results of one year's successful school work.

HIGH SCHOOL.

The principal's report gives a clear statement of the condition and needs of the high school. We fear our citizens

do not duly appreciate the great work which is being done in the high school for the young people of our city. To bring together from day to day such a number of young people and to train them in right habits of thought and conduct, to put before them right motives and ideals, and to stimulate them to reach after those things which lead to heart and soul culture, is indeed a grand work. The respectful bearing of the pupils, their kind regard for each other, their interest in the various lines of work, and their loyalty to every interest of the school, all go to show that the school affords a valuable preparation for future citizenship.

There is a possible danger in all large schools of losing sight of the individual needs of the pupils. In handling large numbers of pupils some system of classification is absolutely necessary. There is danger, however, of making the classification so rigid as to wholly disregard the needs of the individual. To divide the pupils of a given grade in the high school into divisions with no regard for their physical or mental capacities, to give the different divisions the same tasks, to demand of them the same progress, to move them at the same rate, and to require them to finish their work at the same time, is unnatural and unphilosophical. Some natures develop slowly and must have more time to reach certain stages. Other natures develop rapidly and require less time. In a large class where all are doing the same work in the same time, it is very evident that the bright pupils must be held back and the slow ones pushed on. This is an injustice to both classes. The bright ones, not tried to the full extent of their ability, lose much of the discipline which they should gain, and instead of doing their best under the exhilaration of a conscious onward motion and the inspiration of engaging studies,

they fall to the level of careless plodders. The slow pupils are strained to their utmost and are dragged over the ground without time to digest or assimilate what is offered them. These frequently become discouraged and drop out of the class, and sometimes out of the school altogether. The most serious harm befalls those who fail to reach the standard for promotion. The work of the next year is entirely beyond their power, and to spend a second year going over the same work is disheartening in the extreme and has little promise of valuable results.

It would seem that a remedy for this difficulty in our high school may be found by classifying the pupils of the same year into groups or divisions on the basis of ability and qualification. Each division without regard to the progress of the other divisions may be allowed to move on in each branch as rapidly as is consistent with thoroughness and best interests of the pupils. Whenever a division finishes the work in a given branch it may begin at once the work of the next branch in the course. By frequent re-classifications the stronger pupils could be gathered into divisions moving more rapidly and the weaker pupils into divisions taking more time for the completion of the several branches. Some of the divisions might be able to finish the course in three years, some would require four years, and others might require five or even six years to do all the work. By an arrangement of this kind every pupil could be placed where he could do the best work and all could make constant progress, some more rapidly, others more slowly.

SPECIAL REPORTS.

Your attention is respectfully called to the special reports of the supervisors of music, drawing, and physical culture. The work in these lines during the year has been

very satisfactory. The earnestness with which pupils undertake their work, the faithfulness of the regular teachers, and the interest of the parents and citizens, indicate a high appreciation of all of these lines of school instruction. No part of the work during the past year has attracted so much attention and met with so much approval as the work in music and drawing, and in no other lines has the expenditure of money been followed with results more immediate and valuable.

Your attention is also directed to the valuable reports of the citizens' visiting committees. The members of these committees seemed to take more than usual interest in the work of the schools and to make their investigations with painstaking fairness and intelligence. In performing their duties these individuals have rendered valuable service to the schools and to the interests of good citizenship in our city.

MANUAL TRAINING.

Definitions.

In the popular mind the term "industrial education" is made to apply to all kinds of instruction which has to do with the training of the hand. More properly this term should be applied to that kind of instruction which aims to give such training as will give a mastery of some handicraft and to prepare for the successful pursuit of those vocations which are considered the "industries." Under this head may be classified trade schools, technical schools, agricultural colleges, and institutes of technology.

In the trade school emphasis is placed on manual skill and the aim is to make efficient artisans. The technical school is a high grade trade school and in addition to manual skill aims to give thorough and practical training

in the sciences and principles underlying the various industries. When the instruction in the technical school pays particular regard to the various branches and sciences involved in the agricultural industries, we have the agricultural college. Institutes of technology are of university rank and their courses lead to a professional degree, generally to that of civil, mining, or electrical engineer. It seems also to be the special function of these schools to fit for and encourage original investigation in the domain of pure and applied sciences.

The manual training school differs from the others mentioned in the fact that the ends sought are pre-eminently educational. In the industrial school the primary purpose is economic, while in the manual training school it is intellectual training. It must not be inferred, however, that one of these necessarily excludes the other. The method of instruction in the trade school, when logical and well adapted to its purpose, affords excellent mental discipline. On the other hand, instruction intended primarily for the development of the intellectual power is not wanting in economic value. It must, however, be kept in mind that while the social and economic benefits of manual training are great they must be considered secondary to the main object—mental development.

History of Manual Training.

For the past five hundred years leading writers on education have declared themselves in favor of incorporating some kind of manual labor with the scholastic education of youth. Luther and Comenius recognized the value of manual work in education. Pestalozze resorted to manual training, believing it to be an important means in redeeming the vagabond children he collected in his schools.

Those familiar with the principles of the kindergarten know that Froebel's idea was that a full, all-sided education must touch every element of the child's being and bring under the intelligent and orderly control of the will all the impulses toward activity. He believed that even the play of childhood might under proper guidance accomplish definite educational results. He also believed that positive instruction in the occupations of the household, the gardens, the field, or in the trades of the work-shop, was no less educational both in process and result, than were the study and mastery of book knowledge. He gave as a reason for his belief that "lessons through and by work, through and from life, are by far the most impressive and intelligible, and most continuously and intensely progressive both in themselves and in their effect on the learner. Notwithstanding this, children — mankind, indeed — are at present too much and too variously concerned with aimless and purposeless pursuits, and too little with work. Children and parents consider the activity of actual work so much to their disadvantage, and so unimportant for their future conditions in life, that educational institutions should make it one of their most constant endeavors to dispel this delusion. The domestic and scholastic education of our time leads children to indolence and laziness; a vast amount of human power remains undeveloped and is lost. It would be a most wholesome arrangement in schools to establish actual working hours similar to existing study hours; and it will surely come to this."

It was through the influence of Froebel's writings that handcraft was introduced into the elementary schools of Finland. From Finland the educational reform extended to Sweden and all Scandinavian countries, and thence to the whole world. In the several countries this manual

work has a distinctive name. In Sweden it is known as sloyd; in Germany, manual dexterity or workshop instruction; in France, manual labor; and in the United States, manual training.

While without question the technical and trade schools of the European countries surpass those of the United States and are preëminent for their thoroughness and comprehensive specialization, Europe has nothing in the nature of a manual training school that approaches those of America in the breadth of instruction and the completeness of equipment. The manual training school of to day is truly an American product, and its distinctive feature is its incorporation into the curriculum of the elementary school.

Need of Manual Training.

The changed social conditions of our day give need for a system of training that will wisely employ the time and direct the physical activities of our youth. A half a century ago a greater part of the population was in the rural districts and the spare hours of the youth were employed in performing the numerous duties arising necessarily from the busy home and farm life. The appliances of the home and the implements of the farm called for some skill on the part of the boys in at least the elements of carpentry, blacksmithing, and harness making. The girls were kept busy in the weaving, spinning, garment making, and the various duties of the culinary department.

The present social condition is very different. The home duties of the city boy are almost nothing. There is no wood to cut, no water to carry, no fences to build, no axes to grind. With the hireling in the home to attend to the menial duties in the kitchen, the living room, and the bed-chamber, the girls have little chance to become imbued

with that loving and helpful spirit which makes home-making a pleasure and a noble and unselfish character possible. Manual training seems to offer just that training in bodily culture and that knowledge of the practical things of life which our youth of both sexes need.

The industrial conditions of our day make a system of education which offers instruction in hand training very desirable. The organization of labor into clubs and unions and the segregation of manufacturing interests into large shops have almost destroyed the apprentice system. It is now very difficult for a boy to find an opportunity to learn a trade. While the manual training school does not attempt to teach trades, it does lay the foundation of many trades and reveals the adaptability of the powers of the individual for some particular calling.

The piece-work of the large shops of our day threaten much harm to the industrial class. In the small shops the artisan was called upon to do all the different kinds of work required to complete the piece in hand. The planning and execution afforded such exercise of mind and hand, of intelligence and skill, as tended to develop the independence and manhood of the mechanic. In the large factories of to-day piece-work is the rule. The execution of a piece of work planned by another, and the constant repetition of muscular movements until they become automatic, have a tendency rather to stultify and narrow, than to broaden and elevate. It is the theory of manual training that any process should be continued only so long as it is consciously directed by the brain. When any set of movements become automatic they cease to have any educational value and should be discontinued. The aim is to give such exercises as will train the brain and eye and at the same time widen the mental horizon. For the boy who is to take up some industrial calling, manual training af-

fords a most excellent preparation, for it teaches the use of tools, both abstractly and concretely, and at the same time provides for his intellectual needs.

Again, manual training is needed because it meets the physical needs of the youth of both sexes. The exercises which require the more positive and active muscular movements fall to the four years which cover the most critical period of child life — the period of adolescence, from fourteen to eighteen. If child-study does nothing more than to give parents and educators a clearer appreciation of the dangers of this most sensitive and tempestuous period in the development of our youth, it is worth all the labor and thought that has been put into it. This study has made apparent the fact that during this period "the youth himself does not know or understand himself. He seems pressed and impelled by a mighty power from without. The reins of a new life are flung into his hands, and alas! too often no one stands by to aid him guide his fiery chariot. This is the age of the beginning of lofty aspirations, of yearnings to sacrifice one's self for something noble and true. Altruism supplants the mild egotism of the earlier period. Right and wrong begin to look as they never looked before. The religious consciousness is awakened." Thus has Walter Jacobs, of Brown University, expressed himself in the *Educational Review*. Continuing in the same line he further says, "So I might go on to show how the volitional activity of youth yearns to express itself, longs to be something, to do something, to create something. If the whole boy is to be sent to school, it must be the boy doing, as well as the boy thinking and feeling. Froebel did a great service for little children when he proclaimed the educative power of self-activity; but the adolescent must have activity or he will die, intellectually and morally, if not physically. Nor must it be simply the activity of the child.

That is imitative, responds readily to suggestion from without, yields easily to environment; but the adolescent boy resists. He has found his heritage of an ego, and you must yield him an opportunity to externalize it. The fact that all the diseases characteristic of adolescence are diseases of excess declares this pressure of inner energy. The awkward, gawky bearing of the boy just crossing the threshold of the new life makes plain to even the most careless observer that there is more feeling, more energy than there is power to co-ordinate; and the power to co-ordinate, be it physical or mental, can only be gained by action. Action is salvation. A school without a playground, without a laboratory, without a workshop, without a debating society, without incentives to individual investigation and independent work, surely can find no place if educational values are truly appraised."

It is far from our purpose to recommend manual training as a panacea for all ills. It is our belief, however, that manual training furnishes avenues through which some of the surplus energy of youth may be worked off. Its purpose is to direct the youthful activities toward definite and right ends, and to blend the conflicting emotions and energies into harmonious progress toward positive character.

The one-sided instruction offered by the present school system offers another need for the manual training exercises. There has come to be a general feeling that our public schools are not doing all that should be done to fit for citizenship. There is a conviction that there has been too much of the theory and too little of practice, too much of the abstract and too little of the concrete. It has been aptly said that a man who thinks only is only half a man; it is only when he acts that he becomes a whole man. Our school methods have been defective and one-sided because

they have been concerned with the receptive or acquisitive powers only and are intended to cultivate the memory and fill the mind with book learning. The school has deprived the child of much of his natural activity. The effort has been to restrain rather than control and utilize the activities, but "restraint only is annihilation; unintelligent direction is automatism; the only thing gained is the dissipation of surplus energy." The new education must provide for the well directed giving out of energy, as well as for the taking in of knowledge. It must not provide simply for learning, but for the assimilation of what is learned. It is just this need that manual training is fitted to meet. The exercises are intended to utilize the surplus energies of youth in constructive processes. The aim is to develop the powers of doing as well as the powers of thinking; to blend the practical with the theoretic; to find the demonstration of the abstract in the concrete.

The Psychology of Manual Training.

It is perhaps on the psychological side that manual training finds its most positive justification. Mind unfolds with, and manifests itself through, the nervous system. The nerve cell with its attached fiber constitutes the nerve unit or element. The nerve element is a source of energy and is also a place where energy may be stored. The equilibrium of the nerve element is so unstable that a slight irritation may cause it to part with a portion of its energy. All portions of the nervous system are irritable and a change set up in any part by an exciting cause is called a nerve impulse. That which causes the impulse is termed the stimulus.

Portions of the nervous system, made up of cells and connected tissues which respond to stimulating influences and send off sensory or afferent impulses, are called sensi-

tive areas. Other portions, which respond to incoming nerve currents and send out motor or efferent impulses, are called motor areas. Between these two areas is interpolated a group of central cells whose function it is to receive the incoming impulses from the sensitive areas and distribute them to the motor areas. So sensitive are these areas and so numerous and so constant are the stimulating influences that the currents of nerve impulses are constant and the responses ceaseless. In fact, a condition of diffused stimulation is essential to life. "In thus picturing the entire nervous system as a sensitive mechanism," says Dr. Donaldson, "it is evident that it must respond to the surrounding stimuli as does the water of a lake to the breeze; and such is the relation between the central system and its environment that the breeze is always blowing and the waves of change always chasing one another among the responsive elements. If there are no waves then the cells are dead. The breeze still blows, but it falls on a frozen surface, on cells chilled and rigid beyond the power of response." It will be noticed that the natural function of nerve cells is activity. Surcharged with energy and reacting to never-ending stimuli, they must find some outlet or they must soon cease to act. In the early stages of life the nerve impulses result in aimless muscular activity. The restless youth finds natural satisfaction in running, jumping, throwing, or in a good rough-and-tumble romp. These movements do not require a high degree of intelligence, or any decided effort of the will, but they do afford relief to the pent-up energy of the nerve centers and train for more reliable and perfect functional activities.

In addition to this, these muscular activities have a psychological value. Modern psychology tells us that during this period of unusual activity the brain cells are developing and gradually gaining control of the muscles. Any

conscious action produces a certain amount of attention. Attention leads to the exercise of will, and will in turn leads to execution. The constant effort to devise and carry into effect new and untried movements causes structural changes in the motor and sensory areas and tends to specialize the functions of the individual nerve centers. In the development of the child the coarse, instinctive movements resulting from an expenditure of nerve energy *en masse* give way to the most varied and delicate movements produced by highly differentiated nerve cells under the direction of an intelligent will. It is through conscious effort and intelligent co-ordination of movements that the higher mental powers are developed and brought into action. It can therefore be inferred that the physical and mental powers must develop together; that bodily movements and brain activity have reciprocal relations; that hand training is really mind training.

"I am old enough," says Pres. Eliot, "to remember when the brain was supposed to be the seat of the mind, just as the lungs were held to be the furnace that warms the body. I remember being taught that the animal heat was kept up in the lungs, but we all know better now. We know that wherever an atom is consumed, in whatever part of the body, there heat is generated, and therefore that the animal heat pervades the whole organism. It is just so with regard to the human mind, it pervades the body. It is not in the head, but it is all over the body; and when you train the hand, or the eye, or the ear, you train the mind. In the skill of the artist's hand, in the methodical accurate movement of the mechanic's arm, in the acute observation through the physician's eye or ear, there is always mind. Therefore there is no opposition between manual training on the one hand and mental training on the other. We are simply training another kind of faculty

—not memory, but discriminating observation and correct perception."

The immediate product of mind is thought, but thought without expression is impossible, or at least of no avail. "A mental act," says Prof. Hailman, "is incomplete unless through its feelings and thinkings and willings it reaches the corresponding deed. The hand is the projected brain, through which the directing thought achieves the heart purposes of man. The hand mediates inwardly and outwardly between man and his environment, makes him and his environment one and stimulates and establishes thought." Every mechanism and device of the industrial world and every product of the art world is the material expression of a thought. The "rounded Peter's dome," the statues in marble and bronze, the pictures in palace and church, the ships of the sea, and the machinery which moves the busy industries of the world, are but the expressions of the best thought through delicately trained hands. On the other hand, it is through the delicate fingers, the trained arm, the penetrating eye, and the sensitive ear that the mind touches material things and takes in the stimulating impulses which contribute to a deep intellectual life. It is therefore on the psychological side—because it contributes to, and affords a means of expression for, mental life; because it unites thought and action, and makes them vitally and mutually dependent—that manual training finds its strongest justification. Mind ordinarily finds expression in speech and written language, but the deepest and most vital thought finds expression through trained hands and fingers, in material forms; and through conduct and deeds, in permanent character. It is when manual training passes from the realistic to the humanistic side, from the economic to the spiritual side, when it enriches that which is noblest in life and makes life better

worth living, that it becomes a most potent factor in a liberal education.

Room for Manual Training.

At first thought it might seem that in the already crowded course of study there is no room for manual training. It must be remembered that manual training is a method rather than an end in education; that it is a training *by* the hand rather than *of* the hand; that it is a means to an end, and that the end sought is the same as that of the ordinary school exercise — intellectual development. There is room in any course for those exercises which conserve the highest ends of education most completely and with the greatest economy of time and effort.

It is the common experience that physical exercise interspersed in intellectual work not only gives strength to the body but adds tone and vigor to the mind. Many observations go to show also that the ordinary school work alternated with physical activity is done with greater concentration and effectiveness than when uninterrupted for an extended period. This principle was well verified by the observations of the English Child-Labor Commission. This commission secured an enactment compelling the factories to require a definite amount of schooling of each child employe. It was arranged that the children should work in two shifts, one in the morning while the other was in school, the other in the afternoon when the morning laborers became the pupils. The statement is made that "within a few years medical authorities were testifying to superior physical growth; police authorities and philanthropists to improved moral tone; and employers to higher grade of work. This was to have been expected but the surprise came when, after twelve years of careful study of more than 12,000 children, the head of the com-

mission, Sir Edwin Chadwick, was able to report and demonstrate, not only that half timers were doing better work in school than whole timers, and that they were characterized by superior mental activity, but that the full time scholar in the board school found himself at his fourteenth year three years behind the half timer from school and factory."

The best authorities on manual training among our own educators claim that in schools where the regular class work is alternated with manual training exercises, the average in scholarship is better than in schools where the whole time is given to the regular academic branches. The Chicago Manual Training School was established and has been maintained by the Commercial Club of Chicago with a view to testing and proving the value of manual methods in education. Under the direction of one of the ablest and most conservative educators of the day, Dr. H. H. Belfield, this school has for the past thirteen years given manual training a thorough test, and perhaps better than any other school in the country illustrates what manual training may do for boys. This school receives boys who are prepared for high school work. The course covers three years and on the academic side is very similar to the courses in the ordinary high schools, except that there is less language and literature. Three hours, or half of each school day, are given daily to some kind of manual training exercise. The other three hours of the school day are given to the regular academic work. Ten classes have been graduated from this school, and all evidence goes to show that these graduates, who have daily alternated the regular work with the manual training exercises through a period of three years, fully hold their own with the graduates who have given their whole school time to the academic work of courses covering four years. In reply to an

inquiry in regard to the standing of the graduates of this school Dr. Belfield says: "The graduates of this school who have been admitted to higher institutions of learning have soon won the respect, and even admiration, of their instructors. For instance, until the authorities of Cornell University transferred the Calculus from the sophomore to the freshman year, we have been able to fit our best boys for the sophomore year at Cornell, and they have always stood high. We have also for years past fitted boys for the junior year, that is the third year, of Purdue University; and I have the written testimony of President Smart that they hold their own with men who have spent four years in a high school and then entered the freshman year in Purdue. It is true, however, that the great mass of our boys who have continued their studies in higher institutions of learning have been fitted for the engineering work." Graduates of this school, after doing some extra work in the languages, have entered Beloit, Williams, Harvard, Yale, and other colleges, and have always taken high rank.

"Manual training," says President Keyes of the Throop Polytechnic Institute, "should constitute a part of every high school curriculum in order to prevent the wicked waste of time now indulged in, and to stimulate pupils to intellectual concentration. For four years pupils devote their energy for four or six hours daily in preparing for college or completing an equivalent course of study. The manual training high school, on the other hand, gives practically half of each day to hand and eye culture, and sends its graduate out prepared for the best colleges in the country, even when tested by standards that ignore all efforts save those of the traditional lines." President Keyes has also asserted in another connection that of two boys equally endowed by nature and equally well prepared, the

one going to the manual training high school would be prepared, and ought to be required, to pass an examination in mathematics one-fourth harder, and in sciences one-half harder, than his fellow who entered the high school not having manual training. Some more extreme in their views claim that even in literature and language the manual training school boy ought to do better work and pass more difficult examinations, than the boy who is doing the regular work without the manual exercises.

Current psychology has called attention to the two sides of mental life, the receptive and the outgoing or constructive side. It has also made it evident that an exclusive devotion of attention to either one side or the other leads to evil results. The ordinary school methods give attention mainly to the receptive or acquisitive powers, and are therefore one-sided. It has been established that a continuous exercise of the receptive powers of the average pupil for any extended period results in fatigue and mental incapacity. Manual training exercises interspersed in the mental exercises call into activity the constructive powers and give rest and recuperation to the receptive powers. A well balanced alternation between the receptive processes on the one hand and the constructive processes on the other, is a preventive of fatigue and a great conservator of vital interest. After what Froebel termed a "refreshing work-bath" the pupil enters upon the strictly mental exercises with more interest, greater concentration, and new life.

In view of these facts it becomes very evident that there is not only room for manual training, but that there is actual need of it in our system of education. Men truly and effectively promote human welfare more by what they put out and unfold from themselves than by what they acquire. Our schools must provide for the taking in of well selected

knowledge but must not fail to provide for the giving out and utilization of human energy. We need the regular class and study exercises of the school and we need also the manual training to furnish systematic "exercises in translation of thought into action, of inner mental ideas into outward material representations."

Conclusion.

Manual training as a factor in education is no longer an experiment. In theory its value has been acknowledged by educational writers from Luther and Comenius down to the present time. Through the influence of Froebel this educational theory found practical realization in the kindergarten and in the elementary schools of Finland and Sweden. The practical value of manual training has been tested in all the leading countries of Europe and is fully appreciated in America. In the United States the experiments in manual training were made to a large extent by schools established by private enterprise. The success of these experiments has been so marked that this feature in education has been adopted by most of the leading school systems of the country, and no large system is thought to-day to be complete without its manual training department. In view of the present condition of our school finances it seems almost out of place to urge provisions for manual training in the Madison schools. Yet those prominent in the management of the finances of our city must in mind the fact that the day is not far distant when a manual training department will be considered just as essential to a complete system of schools as the departments science and mathematics. Madison cannot afford to be behind other cities of our own and other states in educational matters. In the near future the question of establishing a manual training department in connection with our public schools must receive serious attention.

Respectfully submitted,

R. B. DUDGEON.

PRINCIPAL'S REPORT.

To R. B. DUDGEON,

Superintendent of Public Schools, Madison, Wis.

In my fifth annual report on the High School your attention is respectfully directed to the following:

MANAGEMENT.

No decided changes have been made in the general management of the High School. Our aim has been to carry out plans already introduced and found worthy of a place in our school.

Much attention has been directed to individual responsibility and to the cultivation of thoughtfulness on the part of the pupils.

Believing that the character of study periods largely determine the character of recitations, we have tried to secure as nearly an ideal condition for study as could be secured. Knowing the tendency to overpraise the condition of the main room during study periods, an accurate record has been kept by each teacher in charge. The results shown by this record are most gratifying. A steady increase in the excellence of these periods makes it evident that pupils in the High School realize the importance of their effort to secure good conditions for study. Less attention has been given to the halls than heretofore. More has been expected of pupils and the results have been as fully satisfactory as when the halls were more closely guarded. Here as elsewhere there has been shown an excellent spirit which teachers appreciate and visitors comment upon continually.

PUNCTUALITY AND ATTENDANCE.

The following table shows the tardiness, per cent. of attendance, and enrollment since 1891:

Year.	Tardiness.	Per cent. of attendance.	Enrollment.
1891-1892	697	95	323
1892-1893	472	95.5	339
1893-1894	380	96.5	357
1894-1895	420	95	397
1895-1896	351	96	417

The above table shows a very decided gain in punctuality. With an increased enrollment and the chances for tardiness multiplied by two, we have the actual number of cases of tardiness only three more than one-half the number in 1891 and 1892. Punctuality and regularity of attendance count just as much here as elsewhere. Habits formed in these directions are as valuable in a business way as many other things acquired in the school room. One reason for the gain in this direction is found in the fact that considerable attention has been given to the subject and a consequent pride in a good record is taken by the pupils.

ATHLETICS.

Attention to athletics in the High School does not need great encouragement. A very lively interest already exists and needs direction. Teachers approve just as long as scholarship does not suffer. One most encouraging fact in connection with the subject is the entrance into the athletic field of our best students. We have been especially anxious that high grade scholarship shall be represented on the field.

The records are as follows:

	<i>Games played.</i>	<i>Games won.</i>
Football.....	5	5
Baseball.....	8	6

In the Interscholastic Field Meet the High School gained third place.

PHYSICAL EXERCISES.

Physical exercises have been conducted daily except during the warm weather of the spring term. My estimate of the value of these exercises as at present conducted has already been given in a former report. Considering all the conditions under which the work is done, it is difficult to see how very much better results could be obtained. While the class exercise looks well and results beneficially to some it should not be the regular every-day exercise.

Movements so general in character as to be best for large numbers are necessarily few in number. To many they are valueless; to some, injurious. I have grave doubts about the efficiency of any system not having in view individual development. "An examination consisting of measurements, and strength tests by which the weak and undeveloped portions of the body are discovered, and exercises calculated to strengthen these particular organs and muscles, should be given." This involves a gymnasium with proper equipment.

The present system is by no means devoid of results but it fails to do what most needs to be done. Improved positions in standing — greater ease of movement in general are desirable but would be secured better by adapting the exercises to individual needs.

There is room for improvement under the present system, and yet there are so many limiting conditions that progress is necessarily slow.

TEACHERS.

The influences of the earnest teacher cannot be lost. Exerted as it has been so strongly in favor of scholarship and character, results, unknown outside the school-room and the individual life, have been constantly apparent.

The teaching force loses valuable members in the departure of three able instructors Miss Huenkemeier in History, Miss Noyes and Miss Warning in Mathematics, have impressed themselves upon the High School life in such an excellent way that many good wishes of pupils and teachers will follow them to their new fields of labor.

COURSE OF STUDY.

The course of study remained unchanged except that Physical Geography which heretofore occupied two terms was all taken in the spring term. Leading topics only were selected. Considering the short time the work was well done. This change necessitates a further change for next fall term's work in the second year.

After considerable attention to the subject it has been decided to insert a term's work in Biology for all courses. This meets the approval of U. W. authority, prepares the way for Physiology, and strengthens the second year's work. Consequent upon this change, I would recommend the division of the first year between Civil Government and Physical Geography.

RELATION TO GRAMMAR SCHOOLS.

One of the signs of progress of the year has been the closer relation between Grammar and High School teachers. Frequent conferences regarding the progress of pupils sent to us have resulted most satisfactorily.

If Grammar and High School teachers were to meet more frequently to discuss the work of first year pupils there is every reason to believe that advantage to the pupil would result. This is especially true in the fall term when the beginnings are of so much consequence.

EXAMINATIONS.

The usual final examinations have been held except in certain instances. When teachers are sufficiently satisfied regarding the standing of pupils in the class as judged from daily recitations and written tests, there seems to be no good reason for the existence of the formal examination with its consequent worry and work. Much of course depends upon the daily recitation and it is to be hoped that we shall yet attain such excellence in recitations that the final examination may be omitted entirely. The attainment of such a condition rests largely with the pupils themselves.

LIBRARY.

Additions have been made to the library in the department of literature. I would recommend that these additions be increased and the library be made more of a factor in daily work. The department of Physics should have a large addition. We also need a new encyclopedia, as those now here are inadequate to the needs of so many pupils. The Scientific American has been found on our table for the past two or three years. Might there not be other papers and magazines added?

LABORATORIES.

The equipment of the laboratories needs to be increased to meet the increasing number of pupils. In Physics the approach to individual work is necessarily slow on account of lack of room. If more recitation room could be provided so that the laboratory could be in constant use all the work could be more easily done. As every room is now occupied the present plan must be continued. During the year no expensive apparatus has been bought. Money expended in the department has been for small articles and for materials.

DRAWING.

The introduction of drawing into the high school marks a step in progress for the year. While the young people in the first grade have had more to do than previous first grades there is evidence showing they have done at least as well as previous grades. Required drawing in the first grade with optional work for other grades has certainly been followed by good results. To be convinced of the wisdom of the plan, one needs only to see the work done. Aside from the product in actual drawing, there is a training of great value which shows itself in many

ways. Considering the time devoted to the subject and the difficulties under which it was taken there is every encouragement to continue the plan.

MUSIC.

The same remarks apply to the introduction of music. The most striking result of this is seen in the improved singing at our opening exercises. The effect of the increased excellence of the music is apparent to all. Teachers as well as pupils have derived much inspiration from the hearty way in which pupils have taken hold of the singing.

ARBOR DAY.

The following Arbor Day programme was carried out:

Chorus — "Onward"	School.
Address — "Arbor Day — Its Use and Value"	Edward Cook.
Memory Gems	Pupils—Grade III.
Reading — "For Nature's Sake"—Knapp	Antoinette Schneider.
Address	Mr. J. M. Olin.
Trio—"The Birds' Carol"—Wilson	Pupils — Grade I.
Reading — "Home, Sweet Home"—Anon	Carrie Evans.
Reading — "The American Flag"—Beecher	Morton Green.
Chorus—"The Banner of the Free"	School.
Readings (miscellaneous)	Pupils — Grade II.
Reading—	
a. "A Laughing Chorus"	Carrie Stemple.
b. "Jack and Me"	Leora Moore.
c. "October's Party"	Maud Green.
Piano solo — Selected	Josie Fuller.
Reading—	
a. "Who Plants a Tree"—Larcom	} Minnie Karstens.
b. Columbia — C. Jackson	
Address to Fourth Grade	M. Brabany.
Chorus — "The Wanderer's Song"	School.
Oration — "The Planting of the Tree"	Frank Darling.
Chorus — "America"	School.

ADMISSION FROM OTHER SCHOOLS.

The plan for the admission of outside students needs no essential modification. Students from other high schools applying for advanced standings should be examined in subjects for which they expect credit. We favor giving a student credit for work done elsewhere provided that

work be done in a high school accredited at the University, but in any case no credit should be allowed unless satisfactory work be done after admission.

ATTENDANCE OF FOURTH GRADE.

Owing to the crowded condition of the high school, it was necessary to provide for those who could not be seated in the main room. Finally it was thought best to allow members of grade four to report only for recitations. There is but one argument in favor of such a plan. If students put in their time to advantage the experience is good training for U. W.

There are several reasons why I would urge the discontinuance of the plan:

1. The time is not spent to advantage as shown by recitations.
2. It favors studying together which destroys independence. It makes the weak ones weaker.
3. The loose appearance given to the high school and the liability to interruptions by those who attend in this manner.
4. The tendency to irregular attendance and tardiness is greatly increased.

In view of these and other reasons I strongly favor the seating of all students in the building and requiring the same things of all as far as attendance is concerned. The overflow from the main room can I think be provided for in a satisfactory way.

COMMENCEMENT.

Commencement exercises were of the same character as last year. The following is the program and list of graduates :

Programme.

March — "Under the Double Eagle" — Wagner	Orchestra
Invocation	Rev. A. J. Kempton
*Salutatory	Edward Earl Parkinson
Ballad — "Tender Voices" — Hill	Orchestra
Address	Hon. Burr W. Jones
Medley — "On Broadway" — Beyer	Orchestra
*Valedictory	Ena Kney
Presentation of Diplomas — Prof. J. W. Stearns, Pres. Board of Education	
Two Step — Miss Josephine M. Fuller	Orchestra

*Chosen by the class.

Graduating Class.

English Course.—Nathan Stephenson Curtis, John Edward Goodwin Violet Grey, Harry Hansen, Ena Kney, Jeannette Estella Maltby, Frank Walter Nichols, Lee Allen Parkinson, Roy Erastus Pierce, Goldwin Howard Smith.

General Science Course.—Richard Edward Baus, Lisle Victor Benson, Edward Albert Cook, Frank Edward Darling, Jr., Jessica Esther Davis, Daisy Rumina Dye, Caroline Wheltam Evans, Morton Kay Green, Jennie Edna Housel, Minnie Annie Karstens, Ellen Ware Lamb, Walter Bernard Minch, Edward Earl Parkinson, Antoinette Marie Schneider, Florence Sturm, Paul Gernhardt Winter, Thomas Willett.

Modern Classical Course.—John William Dreyer, Henry Clay Duke, Emma Josephine Erickson, Amelia Caroline Gath, Claudia Jeanie Hall, John Pettit Kelley, Mabel King, Ward Lamberson, John Thomas Stuart Lyle, Lillian Fidelia McCarthy, Ida Jean Monteith, Norman Nelson, Miriam Keith Reed, George Edward Schilling, Eunice Wallace Welsh, Addie Wilke.

CONCLUSION.

There is no doubt as to the progress made in the last year both in the character of work and the general spirit of the High School. While rejoicing in these facts we are fully aware of defects which cannot be easily remedied under existing circumstances.

With increased accommodations and larger facilities for taking care of large numbers of pupils, most of the undesirable conditions will disappear.

Respectfully submitted,

J. H. HUTCHISON,

Principal of High School.

REPORT OF THE SUPERVISOR OF DRAWING.

TO MR. R. B. DUDGEON,

Superintendent of Schools, Madison.

DEAR SIR.—The drawing in the ward schools has been conducted on a plan very similar to that of last year. Because of additional teaching I have been able to visit the rooms but once in two weeks instead of weekly as heretofore. Notwithstanding this, I am happy to report more satisfactory results than in previous years, particularly in the seventh and eighth grades. Both teachers and pupils have seemed to get a broader view of the work. The sketching has been more artistic. In constructive drawing the foundation principles have been more clearly understood, so that the pupils have been able to apply them intelligently to new problems. The work in decoration has been more careful.

In the primary grades we have used charcoal to quite an extent. The children enjoy it and in sketching from nature the work seems freer and more spirited than with pencil. I also consider it a better medium with which to commence shading. By the use of both charcoal and pencil the children have gained much, as each has advantages the other lacks. The drawing has been varied by out-of-door sketching and sketching from life. This last delights the little folks particularly, and when too much time is not given to it, is very profitable. They learn to catch quickly the action and proportions and this helps in all future drawing. The color and form study have been similar to that of last year.

In the grammar grades the lines of drawing have been carried on as previously. The fifth and sixth grades have studied some simple principles of design, applying them in original borders and surface-coverings. Color work has been connected with this. Some of the teachers have very successfully used drawing in their Language and Geography classes. When teachers recognize the mutual relation of the branches taught it is a long step in the right direction.

The time given to decoration in the seventh and eighth grades was

largely spent in the study of Greek Ornament. In this connection some written work was required, for which each pupil designed an appropriate cover. The study of the Greek vase proved most interesting and the pupils thus gained many new ideas of good form. They successfully cut from paper Greek vases, and others, of original design.

In connection with the mechanical drawing we made candle-shades and baskets. The grammar grades showed marked improvement in sketching from objects and from life.

This is only the second year of art work in the High School. Last year optional classes were formed in mechanical and charcoal drawing. This year the same classes were continued, and drawing was made a required study for the first year pupils. The majority took up pencil drawing. The classes were very large, and in each division there were those who had done no drawing, and others who had received three years' instruction in the lower schools. It was impossible to grade them because of the conflict with other classes. Had this been possible the work would have been more satisfactory. The course pursued was designed to help the pupils to ready free-hand sketching. The casts which were purchased for the studio early in the spring made delightful studies for those more advanced. A few who had taken charcoal drawing all last year commenced water-color during the winter, first in monochrome and later in colors.

The classes in mechanical drawing have made drawings of the type-solids, hinges, bolts, clamps, vises, etc., and also worked some problems. This work has been personal, each pupil advancing as he was able. The same has been the case in all the optional classes; but in the first year divisions it has been necessary to make most of the criticisms to the class. This I regret for when pupils have had the instructions in the wards it is time to consider the work of each pupil and give individual guidance. This was done to some extent by correcting drawings after school, and handing them back at the next lesson.

Exhibitions were held at the high school and wards late in the spring, so those interested had an opportunity to judge for themselves of our work, as each pupil was represented. The attendance here, and other manifestations of interest have been most encouraging. It will not be out of place to mention a few.

The management of the Art Loan Exhibition admitted our pupils at a reduced rate, thus giving pleasure to many who might otherwise have been debarred.

The placing of reproductions of masterpieces of art in our school

rooms has been discussed with interest, and a small beginning has been made. I feel those who have taken the initiative in this movement are too much interested to let it drop when so much remains to be done.

Some of the city merchants kindly offered to loan material for use in the High School classes thus giving a wider range of subjects.

It is impossible to mention in detail the individual assistance given to the special work of my department, but, in resigning my position, I take great pleasure in expressing the heartiest appreciation of the helpful co-operation of many outside the schools, as well as of the officers, teachers, and pupils with whom I have so happily worked during the last four years.

Respectfully,

MARY S. MORSE,

Supervisor of Drawing.

REPORT OF THE SUPERVISOR OF MUSIC.

To MR. R. B. DUDGEON,

Superintendent of Schools, Madison, Wis.

Dear Sir:—In looking over the work done in music this year, I feel gratified to note that we have accomplished more than last year, and our work is gradually becoming graded. The spirit is most excellent both among teachers and pupils, and this is conducive to the best results.

The first and second grades read quite readily in six keys, which is two more than we attempted last year. As each key was taken up, the signature and position of "do" was fixed by much drill and constant repetition. The exercises were of a simple character and included no difficulties in time. More stress was laid upon the scale and interval work in order to develop tone perception and thus lay a good foundation for the work in the higher grades. Many little devices have been introduced to make the work pleasing and hold the interest of the pupils.

The little songs, taught by rote, about the birds and flowers, and appropriate to the different seasons of the year, have helped to stimulate in the child a love of nature.

The third and fourth grades have learned most of their songs by note. Thus constant repetition was secured in note reading and much pleasure afforded the children.

In these grades the first series of charts and the one part work in the first reader has been completed.

In the time work we took up the divided beat. This was drilled upon in connection with the scale work and also with simple time exercises by dictation and on the board. We then studied exercises in the different keys from the second reader illustrating this variety of time.

A little two part work was introduced in simple tone exercises. This added interest to the lessons and helped prepare the pupils for the work in the next grade. In one room where we had but the fourth grade,

more difficult work was accomplished. Several two part songs were learned by note, the boys singing the alto.

The fifth and sixth grades completed all the one part exercises in the first and second readers, the first series of charts, and began the second series. Next year we can begin with the second readers as the work in the first reader is now completed in the fourth grade. We have taken two part work in simple tone exercises and also in all the songs. This secures an independence of thought and action not so well obtained from the one part exercises.

In the second primary and first grammar grades we have had some excellent sight reading. The pupils read the exercises through silently, then sung it with books closed. By this means the powers of attention are cultivated, the memory strengthened, and each child obtains the musical thought for himself.

The work in the seventh and eighth grades has been much more advanced than last year. Together with the one and two part work all the three part work has been completed. The three part exercises are "songs without words," and the harmony is such as to develop an appreciation of the highest and best in music. Much attention has been given to the artistic rendering of the exercises as well as the songs. In connection with the physical culture drills, a lesson was given in each room to show to the parents and friends the work as it is taken up daily. While this work has a certain value to the pupil, I cannot help but feel that if the parents would visit our work oftener, and at some other time, they would see the regular work to better advantage.

Music was introduced in the High School this year, lessons being given twice a week to the first-year pupils. Considering the many difficulties we had to overcome, the results were better than anticipated. While the Glee Book is an excellent collection of songs, it was a little difficult for pupils having had but a year's work in note reading. We need a new book which shall be better suited to the pupils coming from the ward schools. It would also add interest to the singing for morning exercises. In the class work all the songs were learned by note, including the three parts.

Articles were read concerning our best musicians. Many of our national songs were discussed, the circumstances which led to their origin, and their authors. We obtained pictures for our room of three of the best composers, Mozart, Hayden, and Beethoven. By means of the pictures, talks, and articles on music, we hope to deepen the interest in music as an art and familiarize the pupils with the great artists.

As each class comes to the High School having had more work in music, we may expect a great improvement in the singing at morning exercises.

It has been said that music with us is too much the diversion of the amateur, and the question asked how it may be brought close to the people. How can we better bring this great subject into the life of the masses than by making it a subject of study throughout our public schools? As some one has said, it should brighten each day's routine, raise the ideals, broaden and enrich our thoughts. Surely this is one of the noblest aims of music — to be that which most beautifies daily life for humanity.

In closing I wish to express my appreciation of the kindness and hearty co-operation of yourself and teachers, which has made my work very enjoyable.

Respectfully submitted,

NELLIE W. FARNSWORTH,
Supervisor of Music.

REPORT OF THE SUPERVISOR OF PHYSICAL CULTURE.

TO R. B. DUDGEON,
Superintendent of City Schools.

DEAR SIR:—In complying with the usual custom I herewith submit my fourth annual report of physical culture in the public schools,

Your knowledge of the policy pursued makes it useless to say much about it. The instruction during the year has followed mainly the lines of preceding years.

As with branches of study quite a difference has been found in the execution of lessons in calisthenics, they being done much better, with more energy and snap in some rooms than in others. By continued practice the pupils of all grades are becoming better able to control body and limbs, so as to obey the dictates of the will. This is clearly demonstrated by the ease and correctness of execution of the more advanced order of exercises I have been able to give in most rooms in the past year. Great improvement has been made in marching and limb movements in particular, the aim being to have movements done precisely yet quietly.

Most of the teachers now take active part when I am giving their class a lesson. By doing so they become much more proficient and familiar with the correctness of movements and methods to be pursued, and it surely must give them more pleasure to conduct lessons for which they are well prepared.

From third grade upward every lesson is scored on the scale of 100. In the last year some classes have made the very high average of 94. This system of marking is not only a reference for me, but it also gives teachers and pupils a chance to see how others of their grade are doing the work and how they compare. It is an incentive for all to do their best to stand as high as possible.

Our this year's Arbor Day "Special" was a flag drill with groupings, to which some teachers added appropriate songs. These drills were repeated in connection with the outdoor drills, just before the closing of schools. A new feature added to the latter this year was singing lessons conducted by Miss Farnsworth. This was very enjoyable, indeed.

this together with the drawing exhibits making a very pleasing display of all work of the special teachers, which was highly appreciated by the visitors, judging by the remarks of approval on all sides.

The work in High School has been much better than ever before, but it must be regarded as a step backward from the more difficult wand exercises of seventh and eighth grades. On my request the school board kindly furnished wands, with which the higher grades, from fifth to eighth, alternate wand exercises with calisthenics, while in High School we can have only the latter under the present arrangement. If some way could be devised to have at least wands and dumb bells in High School, it would be a step in the right direction. Much has already been said about the necessity of a gymnasium for High School, where exercises could be better adapted to suit the individual needs; but this we must leave to the wise judgment of the school board.

Last year I suggested that teachers be particular how pupils stand while reciting and sit in their seats; not to allow anyone to take positions which cannot be otherwise than injurious. This suggestion has been followed by most teachers, but some have been a little neglectful in this respect.

Neither ought teachers to excuse pupils from exercising without good cause.

A number of times I have found a great deal of mud on the floor of some rooms, caused by pupils lingering until the last moment outside the door after last bell has been sounded, and then rushing in without cleaning their shoes. Moving about and shuffling the restless feet fills the air with dust, causing such rooms to be very unhealthy, for the time being, at least.

In conclusion I hope that the above suggestions may be more strictly followed, also that yourself and the teachers may co-operate with me in the future as you have in the past, for which I hereby wish to express my thanks.

Respectfully submitted,

JACOB RETTICH,

Supervisor Phys. Culture.

REPORTS OF VISITING COMMITTEES.

REPORT OF COMMITTEE ON HIGH SCHOOL.

To the President and Members of the Board of Education:

Several visits to the High School were made by each member of this committee during the third term and the full results of their inspection were communicated to the Board of Education at a meeting held near the end of the school year.

In general the report was wholly satisfactory in character. The order and discipline of the school are excellent. All the teachers are earnest in their teaching and successful in their work.

Particular attention was given to the use of English, both in the rhetoric classes, and also in the classes in foreign languages. The members of the committee were gratified to find that the translations into English were carefully criticised as to the excellence of the English, and that the students were required to give an English equivalent for German or Latin phrases and were not allowed to "upset" them into words and constructions as foreign to good English as the foreign tongue itself. They urge, however, continued attention to the proper use of English as of the greatest importance in the training of students, and as one of the most difficult things to secure from them.

The committee was also much interested in the work in English literature.

In science there is the greatest room for unfavorable criticism; not so much in teaching as in equipment. The school is fairly provided with apparatus, but is entirely without proper laboratories. At least two laboratories are imperatively needed if the scientific instruction is to be at all adequate to the needs of the school and of the city. There should be a large, well-lighted and well-equipped physical laboratory, where the students should do regular work daily. Class room work and demonstrations are not at all an equivalent for laboratory work, and laboratory work cannot be done with the care and accuracy necessary to make it really effective as training unless the place and appliances are suitable.

There should also be a biological laboratory, where similar instruction could be given in botany and in zoology, should a course be added in that subject. A couple of old tables on one side of a recitation room may take the place of a laboratory in a poor and small school, but are wholly inadequate to the needs of our students.

The committee would also urge upon the Board of Education the need of providing additional reading for students, either through their own action, or by the co-operation of the City Library. High School students should be trained in the use of books, not only text-books and required "outside reading," but should be taught to consult and examine many books, and thus begin to acquire familiarity with the right use of a library. This is especially necessary in Madison, where so many and so great library resources are open to the student who knows how to use them.

Respectfully submitted,

E. A. BIRGE,
Chairman.

REPORT OF COMMITTEE ON GRAMMAR GRADES.

To the Chairman of the Visiting Committee, Madison, Wis.:

Your committee adopted the following plan of work: Each school was visited by at least two members during the latter part of the second and the first part of the third term, and a written report, which was presented to the Teachers' Committee, was submitted to the chairman. The main points of the six reports were combined into one, and this was handed to the members for correction, addition, etc. The revised report was then presented to the committee at a meeting held May 27th, where it was read, discussed, etc., and finally adopted in the following form:

The public schools of our city are in good condition. Most of the teachers are hard workers; they are conscientious and faithful; they enjoy the confidence of their pupils as is shown by the cordial relations that exist between them, and also the respect of the parents. The discipline in all schools is very good indeed. With the exception of perhaps one school, the tone in the rooms, in the halls, and even on the play grounds is excellent. Almost everywhere we found that obedience, cleanliness, punctuality, and good order and behavior had not only been taught, but were also practiced.

A few teachers however do not possess a full and exact knowledge of some of the subjects which they have to teach; a few lack skill to awaken

in their pupils a spirit of observation and reflection; and some do not, it seemed, prepare their lessons well enough to find out the surest, shortest and most attractive way of making their instruction reach the minds and hearts of their pupils.

The lighting of all the buildings is good, the heating fair, but the ventilation very poor with the exception of the sixth ward school house, which meets all the demands of hygiene. In most of the schools the rooms are ventilated by lowering the windows nearest to the children. In the first ward school the walls of room three are bare. On first entering the second ward schoolhouse an unsightly object is noticed in the drinking water tap. When the halls are warm and the front doors closed a disagreeable odor of rotting wood and sewer gas is noticed which appears to come from this source. There is one room in that building with 48 seats and 52 pupils! In one of the rooms of the third ward school the air was very bad. In the fourth ward school the walls and floors seemed to be dingy, dark and gloomy; the grounds are also in the same condition, comparing in this respect unfavorably especially with the grounds of the second and the room decorations of the sixth ward schools, which seem to merit special commendation. Room one in the fifth ward school needs a new floor, the present one is rough and uneven. The play-ground of the sixth ward school is not as good as it ought to be.

The reading is good in almost all schools. Some of the teachers seem to forget, that this study must be a means to an end, that it must enrich the pupil's store of words and give instruction and mental culture. We recommend that still more attention be paid to intelligent and expressive reading, and to a free and independent synopsis of all the reading lessons. Though we are strongly in favor of supplementary reading, yet we fear that the pupils of our schools read too much and with too great rapidity. In some classes at least we noticed that the reading lesson had not made a fixed nor true impression upon the pupils. We doubt seriously the advisability of obliging pupils to read for instance Emerson, an author whose lines abound in delicate shades of meaning, which need frequent interpretation to make them intelligible to immature minds, as long as they are saddled with teachers who either shed no light on the author's meaning, or else cast false lights, which are worse than none. Classics which are beyond the depth of either teacher or scholar should not be used in the grammar grades.

In the rules of grammar the pupils appeared to be well grounded, but

many lacked the ability of applying them. To be able to do, and not merely to know, must be the end and aim of our schools.

The regular exercises in composition were very good, while the lessons in synonyms were poor in almost all rooms. The definitions given and accepted were often far from being correct. The proper use of a dictionary seemed to be known only in a very few rooms.

Arithmetic is well taught in all our schools. If the problems are solved in a more independent way, and more attention is paid to the "why," than is done now, this study will soon be the pride of our schools.

Some of the teachers complain about Barnes' History. They say that text book is "too hard" for the pupils in the eighth grade.

The poorest study is undoubtedly physical geography. This is partly due to the poor preparation of many teachers for this subject, and partly to the want of a good text book and of good globes and other means of illustration.

Singing and drawing are excellent. In a few schools there seems to be a tendency of paying too much attention to drawing.

Most of the pupils apparently appreciate the healthful physical exercises.

In conclusion we take the liberty of calling the attention to the following general points:

1. A large percentage of the boys of our grammar grade do not attend the high school or a college. In the 8th grade more attention should therefore be paid to the future citizen. The boys of to-day are the "sovereigns" of to-morrow. They ought to know the chief facts and principles about the government of our country, our state and our city; they ought to know at least something about our social institutions; and this they should learn in our schools. There they should be trained "to discover what has already been discovered, to investigate what has been investigated, to seek for what has been found," so that the results of their own investigations should decide their future doings as citizens of our republic. We recommend a more thorough course in the study of citizenship for the 8th grade.

2. The "cost of supplies" is for each pupil of the 5th and 6th grade \$5.76, and for the 7th and 8th grade \$3.79 "excluding all extra supplies." A laborer who earns only \$1.50 per day on an average (and there are many such in our city) and who has more than one child of school age, is unable to furnish the books, and other articles required at the open

ing of the school year. We are afraid that some of the children of our city are deterred from the full benefit of our schools by the cost of books and supplies, and recommend therefore that this point be carefully considered by the proper authorities. We deplore deeply the enormous extravagance in the use of tablets and writing paper. In a large number of schools, compositions, exercises, even examples in arithmetic have to be written on expensive foolscap paper, and many teachers demand of their pupils to write on one side only.

3. We urgently request the Board of Education to prohibit the dangerous practice of so many of our teachers of asking their pupils "to look up a doubtful point at home," or "to ask their parents or friends for information and help." We believe that the school room is the proper place to do this under the guidance of an intelligent teacher.

Respectfully submitted,

W. H. ROSENSTENGEL,
MRS. REUBEN G. THWAITES,
MRS. CARROLL PARKINSON,
MRS. FRANK G. BROWN,
MRS. FRANK W. HALL.

REPORT OF THE COMMITTEE ON PRIMARY SCHOOLS.

To the President and Members of the Board of Education:

GENTLEMEN—Your committee has found much to commend in the primary schools of Madison. The relations between pupils and teachers seem most harmonious. Some of the school rooms are more cheerful and inviting than are others. We would recommend that the children be encouraged to bring growing plants, that there may be boxes in every window, outside in summer, and inside in winter, certainly these with a few prints on the walls, would, in addition to their educational value, make the school room more attractive. A well kept exterior such as second ward presents must have a lasting influence upon the characters of the children, teaching them by an object lesson the care for and love of the beautiful which some, if not all, will carry through life.

Your committee would especially recommend that wherever there are grates in the schools a little fire should always be kept in cool weather, as the best possible means of ventilation. We can but reiterate the familiar complaint that our schools are overcrowded. As long as conditions exist making it necessary to crowd sixty children into one room,

just so long will each of these children be wronged physically and mentally. Can the public not be aroused to the need of increasing the taxes and putting into the hands of the Board of Education adequate means to not only support our schools but improve them? The rights of the individual child demand this and justice to the teacher demands it. We must pay our teachers better for the work they are conscientiously doing, and as an incentive to renewed effort and improved preparation.

The excellent work and results, in primary rooms, of the special teachers, must be a gratification to every parent. The music, the drawing and the physical culture can not be over estimated in their importance to the well rounded development of every man and woman.

We desire, we feel that we must have the kindergarten fully incorporated into our school system. The kindergarten methods adopted by some of our primary teachers show plainly its advantages.

We want, also, to look perhaps into a possible future manual training and domestic science courses in our school system.

The receptiveness of the pupils, the attitude of the teachers, the general atmosphere of our primary schools are so excellent as to demand of their supporters, approbation and all possibilities for further improvement.

Respectfully submitted,

EUGENIA PITMAN,
LOUISE PHILLIPS,
M. C. SLICHTER,
NETTIE M. BROWN,
— CHANDLER.

CONTAGIOUS DISEASES.

No pupil should be permitted to attend any of the public schools of this city from a dwelling in which a person is sick with scarlet fever, small-pox or diphtheria.

Nor shall any pupil who has been exposed to either of said diseases, and is liable from such exposure to have or communicate the same, be permitted to attend any of said schools until a reputable resident physician or the health officer shall certify that all danger of spreading contagion by such pupil is past.

Nor shall any pupil who has been sick with either of said diseases be allowed to attend any of said schools for a period of six weeks after his recovery therefrom, and then only upon the health officer's certificate that the residence and clothing of such pupil have been thoroughly disinfected, and that there is no danger that others will take the disease from such pupil.

No pupil who has any contagious disease not named in the preceding rule, or who has been exposed to any such disease, and is liable from such exposure to have or communicate the same, shall be permitted to attend any public school in the city, except upon the written permission of the health officer.

VACCINATION.

The following statements and rules were adopted by the State Board of Health of Wisconsin, June 21, 1894:

WHEREAS, The State Board of Health of the state of Wisconsin is empowered, authorized and directed by law to make such rules and regulations for the protection of the people of the state from dangerous contagious diseases as in its judgment may be necessary, and

WHEREAS, With the prevalence of small-pox (which disease is by said State Board hereby designated as contagious and dangerous to the public health), in this and in other states, the assembling of unvaccinated children in the schools of the state is believed to be a source of

spécial danger to the people of the state, the State Board of Health does hereby adopt and publish the following rule, to be of general application throughout the state:

CONTAGIOUS DISEASES.

SECTION 1. No child shall be allowed to be enrolled as a pupil in any public, private or parochial school without first presenting to the principal or teacher of the school in which he applies for enrollment or attendance the certificate of a reputable physician that he has been successfully vaccinated, or in lieu of such certificate of successful vaccination, certificate from a reputable physician that such child has been vaccinated at least twice within a period of three months next preceding the date of such application, such latter certificate, however, shall be void after the expiration of one year from its date.

SECTION 2. No parent or guardian of any child shall allow or permit such child to attend any public, private or parochial school in this state and no principal or teacher of any such school shall allow a child to be enrolled as a pupil or attend such school as such without the evidence of vaccination herein required, and it is hereby made the duty of the proper school authorities in their respective localities to enforce the foregoing rule.

COURSE OF STUDY.

FIRST GRADE.

ENGLISH: 1. Reading.—Words and sentences from blackboard and chart. Word method supplemented by sentence and phonic methods. Parts of several First Readers, changing from one to another as vocabularies and circumstances make desirable.

2. Word Study.—Word building. Capitals. Abbreviations.

3. Oral and Written Exercises.—Conversations suggested by objects, pictures, and individual experiences of pupils. Reproduction of short stories, myths, and fairy tales told by the teacher. History stories.

4. Memorizing Choice Selections.

NUMBERS: Object exercises to 10. Writing and reading numbers of three orders. Drill on the primary combinations to 10. Board and slate exercises corresponding to oral exercises. Rapid drill in adding single columns, applying constantly the known combinations. Story problems, using familiar denominate numbers and objects. Analysis of simple problems.

NATURE STUDY: Oral lessons on the human body. Lessons on plants, tree blossoms, and flowers.

PENMANSHIP: Particular attention to position of body and pencil. Simple exercises to train the muscles of hand and arm. Careful supervision of all writing to prevent the formation of bad habits. Present perfect copies on blackboard and paper for children to study and copy. Teach capitals as needed.

INDUSTRIAL: Clay modeling, block building, stringing straws and beads, tablet laying, paper folding, stick laying, picture cutting, perforated cardboard embroidery, etc. Prang's models for Form Study and Drawing, No. 20, in the hands of the pupils.

SECOND GRADE.

ENGLISH: 1. Reading.—First Reader completed. Two Second Readers. Continue use of blackboard in teaching new words. Drill in

elementary sounds. Teach meaning of words by association, not by formal definition.

2. Word Study.—Words from reading lessons copied and spelled from dictation.

3. Oral and Written Exercises.—Reproduction of short stories, myths, and fairy tales. Description of pictures. History stories. Exercises based on nature study.

4. Memorizing choice selections.

NUMBERS: Revised Model Elementary Arithmetic to page 96.

GEOGRAPHY: See outline for oral lessons in geography.

NATURE STUDY: Lessons on plants and animals according to outline.

PENMANSHIP: Drill exercise for position and movement. Daily use of pencil and paper. Criticism of writing in all exercises. Have a definite time for special drill. Use pen and ink. Sheldon's vertical writing, Book No. 2.

INDUSTRIAL: Models for Form Study and Drawing, No. 21, in the hands of the pupils.

THIRD GRADE.

FALL TERM.

ENGLISH: 1. Reading.—A more difficult Second Reader. Scudder's Book of Fables and Folk Stories.

2. Word Study.—Words and sentences written from dictation with pen in regular spelling blank. Lists of words from reading lessons and other exercises copied on the board by the teacher and studied by the pupils from the script forms.

3. Oral and Written Exercises.—Reproduction of stories and descriptions. Copying sentences and stanzas. Capitals. Use of quotation marks and apostrophe. History stories. Letter-writing.

4. Memorizing Choice Selections.

NUMBERS: Revised Model Elementary Arithmetic to page 141.

GEOGRAPHY: See outline for oral lessons in geography.

NATURE STUDY: Lesson on plants and animals according to outline.

PENMANSHIP: Special exercises for freedom of movement and light lines. Sheldon's vertical writing, Book No. 3.

DRAWING: Prang's Complete Course, Book 1.

WINTER TERM.

ENGLISH: 1. Reading.—A Third Reader. Hans Andersen's Fairy Tales, First Series.

2. Word Study,—Continue work of fall term.

3. Oral and written Exercises,—Dictation exercises, common abbreviations, plurals in s, singular possessive forms. Reproduction of stories and descriptions. Exercises based on nature study.

4. Memorizing Choice Selections.

NUMBERS: Revised Model Elementary Arithmetic to page 180.

GEOGRAPHY: See outline for oral lesson in geography.

NATURE STUDY. Lesson on plants and animals according to outline.

PENMANSHIP: Complete Book 3, and the first twelve pages of Book 4.

DRAWING: Prang's Complete Course, Book 1 continued.

SPRING TERM.

ENGLISH: 1. Reading,—A Third Reader. The Story Mother Nature Told Her Children.

2. Word Study,—Continue work of fall term.

3. Oral and Written Exercises,—Proper verb forms from copy and dictation exercises. Contractions. Letter-writing. Reproduction of history stories and descriptions. Exercises based on nature study.

4. Memorizing Choice Selections.

NUMBERS: Revised Model Elementary Arithmetic to page 193.

GEOGRAPHY AND HISTORY: See outline for oral lessons in geography. American History Stories.

NATURE STUDY: Lessons on plants and animals according to outline.

PENMANSHIP: Complete Book 4.

DRAWING: Prang's Complete Course, Book 1, completed.

FOURTH GRADE.

FALL TERM.

ENGLISH: 1. Reading,—Selections from a Third Reader. Hawthorne's Little Daffydowndilly and other Stories, and Biographical Stories.

2. Word Study,—Continue work of third grade. Use of dictionary.

3. Oral and Written Exercises.—Dictation and reproduction of historical, geographical, and nature study matter. Use of capital letters. Letter-writing.

4. Memorizing Choice Selections.

NUMBERS: Revised Model Elementary Arithmetic to page 225.

GEOGRAPHY AND HISTORY: Geography of Wisconsin according to outline. Readings from Thwaites' Historic Waterways. Stories of the history of Wisconsin.

NATURE STUDY: Seeds, their dissemination by winds, currents, and animals. Trees, their preparation for winter as shown by leaves sap, and buds. Observation of plants as the season changes.

PENMANSHIP: Same as third grade.

DRAWING: Same as third grade.

WINTER TERM.

ENGLISH: 1. Reading,—Selections from Third Reader for drill work. Hawthorne's Little Daffydowndilly and other Stories, and Biographical Stories.

2. Word Study,—Continue work of the third grade. Use of the dictionary.

3. Oral and Written Exercises,—Dictation and production of historical, geographical, and nature study matter. Plural possessives. Abbreviations. Letter-writing.

4. Memorizing Choice Selections.

NUMBERS: Revised Model Elementary Arithmetic to page 262.

GEOGRAPHY AND HISTORY: See outline for oral lessons in geography. Pioneer History of the Mississippi River, read by the teacher.

NATURE STUDY: Effects of freezing on plants. Winter condition of plants. Protection of buds. Effects of freezing and thawing on different kinds of ground, under varying conditions.

PENMANSHIP: Same as third grade.

DRAWING: Same as third grade.

SPRING TERM.

ENGLISH. 1. Reading,—Continue work in Third Reader. Ruskin's King of the Golden River.

2. Word Study,—Continue work of the third grade. Use of the dictionary.

3. Oral and Written Exercises,—Dictation and reproduction of historical, geographical, and nature study matter. Plurals in *es*, *ves*, and without *s*. Possessives. Drill on verb forms and pronouns commonly misused. Letter-writing.

4. Memorizing Choice Selections.

NUMBERS: Revised Model Elementary Arithmetic completed.

GEOGRAPHY AND HISTORY: See outline of oral lessons in Geography. Stories from Roman history.

NATURE STUDY: Seeds and Germination. Buds. Reproduction of flowers.

PENMANSHIP: Same as third grade.

DRAWING: Same as third grade.

FIFTH GRADE.

FALL TERM.

ENGLISH: 1. Reading,—Eggleston's First Book in American History.

2. Word Study,—Two exercises from Sheldon's Word Studies, two from lists of words from other lessons, and one review exercise each week. All words studied from the blackboard in script forms.

3. Oral and written exercises,—Dictation and reproduction of literary, historical, and geographical matter. Continue work in letter forms, punctuation, abbreviations, word forms, and letter writing.

4. Memorizing Choice Selections.

ARITHMETIC: Fundamental operations. Decimal fractions.

GEOGRAPHY AND HISTORY: Physical and Political North America. Physical and Political United States. Use progressive outline maps. Longitude and Time. Stories of American History,—explorers, colonists.

NATURE STUDY: Lessons on the human body, with special reference to the effects of stimulants and narcotics through the year. Smith's Primer of Physiology in hands of teacher.

PENMANSHIP: Special exercises for freedom of movement. First twenty pages of Book 5, Sheldon's Vertical Writing.

DRAWING: Prang's Complete Course, Book 4.

WINTER TERM.

ENGLISH: 1. Reading,—Hawthorne's Grandfather's Chair.

2. Word Study,—Same as fall term. Use of dictionary.

3. Oral and Written Exercises,—Dictation and reproduction of literary, historical, and geographical matter. Special attention to capitals and punctuation.

4. Memorizing Choice Selections.

ARITHMETIC: United States Currency. Factors and Multiples.

GEOGRAPHY AND HISTORY: Middle Atlantic, South Atlantic, South Central, and North Central States. Stories of the French and Indian Wars.

NATURE STUDY: Lessons on the human body continued one period a week.

PENMANSHIP: Complete Book 5, and first twelve pages of Book 6.

DRAWING: Prang's Complete Course, Book 4 continued.

SPRING TERM.

ENGLISH: 1. Reading,—Kingsley's Water Babies.

2. Word Study,—Same as fall term.

3. Oral and Written Exercises,—Dictation of literary, historical, and geographical matter. Paraphrasing of sentences and paragraphs. Parts of speech,—Subject and predicate taught incidentally.

4. Memorizing Choice Selections.

ARITHMETIC: Common fractions.

GEOGRAPHY AND HISTORY: West Central States, States of the Plain, Western States, and Commercial Geography of the United States. Stories of the Revolutionary and National Periods.

NATURE STUDY: Lessons on the human body continued one period a week.

PENMANSHIP: Complete Book 6.

DRAWING: Prang's Complete Course, Book 4 completed.

SIXTH GRADE.

FALL TERM.

ENGLISH: 1. Reading,—Robinson Crusoe.

2. Word Study,—Continue work of fifth grade. Analysis of derivative words. Compound words.

3. Oral and Written Exercises,—Dictation, narration, and reproduction of literary, historical, and geographical matter. Composition work in chapters I to VI inclusive, and Parts of Speech in chapter XII, Southworth's and Goddard's Elements of Composition and Grammar.

4. Memorizing Choice Selections.

ARITHMETIC: Finish common fractions.

GEOGRAPHY AND HISTORY: British America, Mexico, Central America, West Indies, South America. Stories of American History from Revolutionary period to the Civil War.

NATURE STUDY: General exercises on the atmosphere,—properties, temperature, winds, moisture, climate, electrical and optical phenomena. See Warren's New Physical Geography, pages 67 to 94.

PENMANSHIP: Same as fifth grade.

DRAWING: Same as fifth grade.

WINTER TERM.

ENGLISH : 1. Reading,—Hawthorn's Wonder Book.

2. Word Study,—Continue work of the fall term.

3. Oral and Written Exercises,—Dictation, narration and reproduction of literary, historical, and geographical matter. Composition in text book in chapters VII and VIII, and Parts of Speech in chapter XII.

4. Memorizing Choice Selections.

ARITHMETIC : Denominate numbers, including linear measure, square measure, cubic measure, liquid measure, dry measure, avoirdupois weight, table of time, and miscellaneous tables, with a few applications under each.

GEOGRAPHY AND HISTORY : Physical and Political Europe. Stories from Greek and Roman History.

NATURE STUDY : General exercises on water,—springs, rivers, lakes, oceans, oceanic movements. See Warren's New Physical Geography pages 44 to 66.

PENMANSHIP : Same as fifth grade.

DRAWING : Same as fifth grade.

SPRING TERM.

ENGLISH : 1. Reading,—Burrough's Birds and Bees, and Sharp Eyes.

2. Word Study,—Continue work of fall term.

3. Oral and Written Exercises,—Dictation, narration, and reproduction of literary, historic, and geographical matter. Composition in text-book in chapters IX to XI inclusive, and Parts of Speech in chapter XII.

4. Memorizing Choice Selections.

ARITHMETIC : Miscellaneous problems under denominate numbers and practical rules.

GEOGRAPHY AND HISTORY : Physical and Political Asia. Oceanica. Stories of Chivalry and Crusades.

NATURE STUDY : Seeds and germination. Buds. Roots. Leaves. Reproduction, flowers and seeds.

PENMANSHIP ; Same as fifth grade.

DRAWING : Same as fifth grade.

SEVENTH GRADE.

FALL TERM.

ENGLISH : 1. Reading,—Kingsley's Greek Heroes.

2. Word Study,—Exercises selected from Sheldon's Word Studies and from other branches of study. Words studied from script forms.

3. Oral and Written Exercises,—Dictation, narration, description and reproduction of literary, historical, and nature study matter. Biographical sketches.

4. Grammar,—Southworth and Goddard's Elements of Composition and Grammar, chapter XIII, with review of chapter XII. Sentence analysis.

5. Memorizing Choice Selections.

MATHEMATICS : 1. Arithmetic,—Percentage and applications to simple interest.

2. Algebraic expressions and symbols, including the methods of solving simple equations.

GEOGRAPHY AND HISTORY : 1. Physical and Political Geography of Africa.

2. Principal ocean and trade routes of the world.

3. Mathematical geography.

NATURE STUDY : Elements of astronomy in connection with mathematical geography.

PENMANSHIP : Sheldon's vertical writing, Book No. 7, to page 20.

DRAWING : Prang's Complete Course, New Book 7.

WINTER TERM.

ENGLISH : 1. Reading,—Scott's Lady of the Lake.

2. Word Study,—Continue work of fall term.

3. Oral and Written Exercises,—Continue work of fall term. Historical sketches.

4. Grammar,—Text-book, chapters XIV and XV. Sentence analysis continued.

5. Memorizing Choice Selections.

MATHEMATICS : 1. Arithmetic,—Percentage to partial payments.

2. Elements of Algebra,—Simple equations.

GEOGRAPHY AND HISTORY : 1 Wisconsin in detail.

2. Civil government of state, county, city.

3. Stories from the history of England. Discovery and exploration of United States.

COURSE OF STUDY.

77

NATURE STUDY: Lessons on elementary physics,—properties of matter, mechanical powers.

PENMANSHIP: Book 7 completed and Book 8 to page 13.

DRAWING: Prang's Complete Course, New Book 7 continued.

SPRING TERM.

ENGLISH: 1. Reading,—Longfellow's *Children's Hour* and other Selections, Warner's *A-Hunting of the Deer* and other Essays, Hawthorne's *Tanglewood Tales*, Part II, Riverside Series, Triple Number.

2. Word Study,—Continue work of fall term.

3. Oral and Written Exercises,—Continue work of fall term.

4. Grammar,—Text-book, chapter XVI. Sentence analysis continued.

5. Memorizing Choice Selections.

MATHEMATICS: 1. Arithmetic,—Percentage completed.

2. Elements of Algebra,—Fundamental operations and factoring.

HISTORY: United States. Discovery and Exploration. Colonial period. French and Indian war.

NATURE STUDY: Oral lessons in elementary physics,—sound, light, heat.

PENMANSHIP: Book 8 completed.

DRAWING: Prang's complete course, New Book 7 completed.

EIGHTH GRADE.

FALL TERM.

ENGLISH: 1. Reading,—Masterpieces of American Literature.

2. Word Study,—Same as seventh grade.

3. Oral and Written exercises,—Description of persons, places, manners, and customs, as found in reading, history, and geography.

4. Grammar,—Text-book, chapters XVII and XVIII. Sentence analysis continued.

5. Memorizing Choice Selections.

MATHEMATICS: 1. Arithmetic,—Ratio and proportion, Involution and Evolution.

2. Concrete Geometry,—One period a week.

HISTORY: United States, revolutionary period. Administrations through the war of 1812.

NATURE STUDY: Same as seventh grade.

PENMANSHIP: Same as seventh grade.

DRAWING: Same as seventh grade.

WINTER TERM.

ENGLISH: 1. Reading,—Masterpieces of American Literature.

2. Word Study,—Same as seventh grade.

3. Oral and Written Exercises,—Continue work of fall term.

4. Grammar,—Text-book, chapters XIX to XXIII inclusive. Sentence analysis continued.

5. Memorizing Choice Selections.

MATHEMATICS: 1. Arithmetic,—Miscellaneous examples and general review.

2. Concrete Geometry,—One period a week.

HISTORY: United States, Administrations, and Civil War.

NATURE STUDY: Same as seventh grade.

PENMANSHIP: Same as seventh grade.

DRAWING: Same as seventh grade.

SPRING TERM.

ENGLISH: 1. Reading,—Masterpieces of American Literature.

2. Word Study,—Same as seventh grade.

3. Oral and Written Exercises,—Continue work of fall term.

4. Grammar,—Text-book, finished and reviewed.

5. Memorizing Choice Selections.

MATHEMATICS: 1. Arithmetic,—The Metric System, applications made by pupils.

2. Concrete Geometry,—One period a week.

HISTORY: United States, reconstruction and topics of the times.

NATURE STUDY: Same as seventh grade.

PENMANSHIP: Same as seventh grade.

DRAWING: Same as seventh grade.

COURSE IN READING AND LITERATURE FOR THE ELEMENTARY GRADES.

FIRST GRADE.

CLASS READING.— Words and sentences from blackboard, slates, and charts. Word method supplemented by the sentence and phonic methods. Use script from the beginning. Insist on accuracy, neatness, and legibility in all slate and blackboard work. Read parts of several First Readers, changing from one to another as the vocabularies and circumstances may make desirable. The final accomplishment of the year's work should give the pupil the ability to recognize readily all words taught, to read intelligently simple sentences and paragraphs, and to spell by letter and sound the words of the reading lessons.

STORY TELLING.— The teacher will tell the children some of the classic nursery tales, — Red Riding Hood, Cinderella, Jack and the Beanstalk, Jack the Giant Killer, Stories from the old Testament, and such others as may be selected.

READING TO CLASS.— The teacher will read to the children from Stories for Kindergarten and Primary Schools, and selections from the list on page 90.

SELECTIONS TO BE MEMORIZED.— The Baby, Baby Bye, Sweet and Low, Little Pussy, How they Talk, The Owl and the Pussy Cat.

SECOND GRADE.

CLASS READING.— First Readers completed. Two Second Readers. Continue use of blackboard and slates in teaching new words. Drill in elementary sounds, giving attention to pairs and combinations of letters representing sounds. Special drill in pairs and groups of words which must be spoken together. Teach meaning of words by association, not by formal definition. The final accomplishment of the year's work should give the pupil power to call at sight all words taught, to

know what they mean in the sentence, to understand the thought of the lesson, and to express the thought in an easy manner, with tones of voice resembling those heard in good conversation.

STORY TELLING.—The teacher will tell the children the stories of Siegfried, Theseus, Perseus, Circe's Palace, Ariadne, and other myths.

READING TO CLASS.—The teacher will read to the children from Stories for Kindergarten and Primary Schools, and selections from list on page 90.

SELECTIONS TO BE MEMORIZED.—The Boy and the Bird, The Cloud, A Visit from St. Nicholas, Hang Up the Baby's Stocking, the Little Lazy Cloud, The Boy's Song.

THIRD GRADE.

FALL TERM.

CLASS READING.—A more difficult Second Reader. Scudder's Book of Fables and Folk Stories. Meaning of words, phrases, and sentences. Cultivate the art of getting out of books what is in them by requiring the substance of all lessons in the language of the pupil. Give frequent tests in silent reading. Let occasional lessons be very abundant with respect to quantity to test the ability of the pupil to apprehend readily the printed page. Give frequent tests in sight reading to cultivate ability to call new words.

READING TO CLASS.—Stories of Children of Other Nations, Little Lucy's Wonderful Globe, Hero Stories from Homer's Iliad and Odessey, and selections from the list on page 91.

SELECTIONS TO BE MEMORIZED.—Hiawatha's Childhood, Little Moments, Kitty.

WINTER TERM.

CLASS READING.—A Third Reader. Hans Andersen's Fairy Tales, First Series. Continue work of fall term. Aim to have pupils acquire naturalness of expression, correct pronunciation, and fluency.

READING TO CLASS.—Little Lord Fauntleroy, Adventures of a Brownie, Queer Little People, and selections from list on page 91.

SELECTIONS TO BE MEMORIZED.—The Child's World, Suppose My Little Lady, A Good Name.

SPRING TERM.

CLASS READING.—A Third Reader. The Story Mother Nature Told Her Children. Continue work of fall term.

READING TO CLASS.—Hans Andersen's Fairy Tales, Second Series, Princess Idleways, Black Beauty, Toby Tyler, and selections from list on page 91.

SELECTIONS TO BE MEMORIZED.—Little by Little, the Brown Thrush, Seven Times One.

FOURTH GRADE.

FALL TERM.

CLASS READING.—Selections from a Third Reader. Hawthorne's Little Daffydowndilly and Other Stories, and Biographical Stories. Make intelligent silent reading the first object. Have substance of lessons reproduced by pupils before reading aloud. See that the details as well as the outline of the stories are observed. Have short stories read once at sight and then reproduced in writing. Give special oral drill. Encourage home reading.

READING TO CLASS.—Each and All, Mr. Stubb's Brother, The Hoosier School Boy, Cast Away in the Cold, and selections on page 92.

SELECTIONS TO BE MEMORIZED.—Boys Wanted, Little Brown Hands, To-Day.

WINTER TERM.

CLASS READING.—Selections from the Third Reader for drill work. Hawthorne's Little Daffydowndilly and Other Stories, and Biographical Stories. Continue work of fall term.

READING TO CLASS.—Benjamin Franklin, the Little Lame Prince, and selections from list on page 92.

SELECTIONS TO BE MEMORIZED.—The Sculptor, Somebody's Mother, The Children's Hour.

SPRING TERM.

CLASS READING.—Continue work in Third Reader. Ruskin's King of the Golden River. Continue work of fall term.

READING TO CLASS.—Aunt Martha's Corner Cupboard, Little Folks of Other Lands, Hans Brinker and the Silver Skates, and selections from list on page 92.

SELECTIONS TO BE MEMORIZED.—Hiawatha's Sailing. The Fountain.

FIFTH GRADE.

FALL TERM.

CLASS READING.—Eggleston's First Book in American History. Give special attention to clear and distinct articulation. Teach use of dictionary and diacritical marks. Continue work of preceding year.

READING TO CLASS.—Story of King Midas, Paul Revere's Ride, Life in the North, and selections from the list on page 93.

SELECTIONS TO BE MEMORIZED.—The Vicar's Sermon, The Village Blacksmith, Landing of the Pilgrims, The Arrow and the Song.

WINTER TERM.

CLASS READING.—Hawthorne's Wonder Book. Continue work of fall term.

READING TO CLASS.—Grandmother's Story of Bunker Hill, Rip Van Winkle, and selections from list on page 93.

SELECTIONS TO BE MEMORIZED.—How Sleep the Brave, One by One, Break, Break, Break.

SPRING TERM.

CLASS READING.—Kingsley's Water Babies. Continue work of fall term.

READING TO CLASS.—Prince and Pauper, Great Stone Face, and selections from list on page 93.

READ AT HOME.—The Four MacNicols, Boys of Other Countries, Washington and his Country.

SELECTIONS TO BE MEMORIZED.—The Barefoot Boy, Beautiful Things.

SIXTH GRADE.

FALL TERM.

CLASS READING.—Robinson Crusoe. Cultivate the pictorial imagination by requiring pupils to see clearly pictures in words and to represent to themselves the details of descriptions. In oral reading insist upon distinct enunciation, good tones, and proper position.

READING TO CLASS.—Swiss Family Robinson, Twice Told Tales, Juan and Juanita, and selections from list on page 94.

READ AT HOME.—Tanglewood Tales, Daniel Boone.

SELECTIONS TO BE MEMORIZED.—Psalm of Life, Independence Bell, The Last Leaf, Ring Out Wild Bells.

WINTER TERM.

CLASS READING.—Hawthorne's Grandfather's Chair. Continue work of fall term.

READING TO CLASS.—The Arabian Nights, Stories from the History of Rome, and selections from list on page 94.

READ AT HOME.—Plutarch's Lives, Uncle Tom's Cabin.

SELECTIONS TO BE MEMORIZED.—The Builders, Breathes There a Man, The First Snowfall.

SPRING TERM.

CLASS READING.—Burrough's Birds and Bees, and Sharp Eyes. Continue work of fall term.

READING TO CLASS.—Ten Boys on the Road from Long Ago to Now, Little People of Asia, Chuck Purdy, and selections from list on page 94.

READ AT HOME.—Little Men, Little Women, My Summer in a Garden.

SELECTIONS TO BE MEMORIZED.—The American Flag, Hunting Song, The Four Lakes of Madison.

SEVENTH GRADE.

FALL TERM.

CLASS READING.—Kingsley's Greek Heroes. Definition of important words and phrases. Logical relation to sentences. Historical, geographical, and literary allusions. Rigid and systematic drill in distinct articulation and pronunciation.

READING TO CLASS.—Turn, Fortune, Turn, The Old Man Dreams, and other selections from list on page 95.

READ AT HOME.—Boys Who Became Famous, Tom Brown, The Spy.

SELECTIONS TO BE MEMORIZED.—Sweet is the Pleasure, Sparticus to the Gladiators, Alfred the Great to His Men, The Chase, Soldier Rest, and other selections from Lady of the Lake.

WINTER TERM.

CLASS READING.—Scott's Lady of the Lake. Study biography of author, style of composition, and scope of selection. Recognize simple figures of speech. Cultivate pictorial imagination. Require written expansion of incidents, development of word pictures and comparison of characters.

READING TO CLASS.—The Festal Board, the Bells, and other selections from list on page 95.

READ AT HOME.—Tales of a Grandfather, Girls Who Became Famous, The Last of the Mohicans, The Pilot, The Chambered Nautilus.

SELECTIONS TO BE MEMORIZED.—The National Flag, The Ship of State, What Constitutes a State, Gradatim or Round by Round.

SPRING TERM.

CLASS READING.—The Children's Hour, Warner's A-Hunting the Deer, and Tanglewood Tales, Part II. Riverside Series, Triple Number.

READING TO CLASS.—The Witch's Daughter, Courtship of Miles Standish, and other selections from list on page 95.

READ AT HOME.—Tales of a Grandfather, Stories of Adventure, Indian History for Young Folks.

SELECTIONS TO BE MEMORIZED.—Clear the Way, Flowers, Crossing the Bar, Nobility.

EIGHTH GRADE.

FALL TERM.

CLASS READING.—Masterpieces of American Literature. Explanation of figures of speech, analysis of the thought, rearranging the elements of the sentence, substitutions of synonyms or equivalent phrases, and expanding picturesque words into paragraphs, are all valuable exercises. Reproductions both oral and written should be frequent. Choice passages should be marked and memorized.

READING TO CLASS.—Paul Revere's Ride, Nathan Hale, and other selections from list on page 96.

READ AT HOME.—Stories of Discovery, Stories of our Country, Fisk's Washington and His Country, Standish of Standish, Betty Alden.

SELECTIONS TO BE MEMORIZED.—Warren's Address, To a Water Fowl, The Song of Marion's Men, The Chambered Nautilus, An Appeal to Arms, Old Ironsides.

WINTER TERM.

CLASS READING.—Masterpieces of American Literature. Continue work of fall term.

READING TO CLASS.—The Slave Ships, John Burns of Gettysburg, and other selections from list on page 96.

READ AT HOME.—The Talisman, The Last of the Mohicans, John Halifax, The Oregon Trail.

SELECTIONS TO BE MEMORIZED.—Snow Bound (The Snow Storm), Lincoln's Address at Gettysburg, Liberty and Union, Thanatopsis (Selections).

SPRING TERM.

CLASS READING.—Masterpieces of American Literature. Continue work of fall term.

READING TO CLASS.—Custer's Charge, The Vagabonds, The Cry of the Children, and other selections from list on page 96.

READ AT HOME.—Boys of '61, Life of Abraham Lincoln, Ben Hur, David Copperfield.

SELECTIONS TO BE MEMORIZED.—What is so Rare as a Day in June, Mercy (Portia to Shylock), The Blue and the Gray, A Man's a Man for a' That.

SELECTIONS TO BE MEMORIZED BY PUPILS.

FIRST AND SECOND GRADES.

FALL TERM.

Baby Bye.....	<i>Theo. Tilton.</i>
I Love Little Pussy.....	<i>Jane Taylor.</i>
How They Talk	<i>Marcus Wilson.</i>
The Owl and the Pussy Cat	<i>Edmund Lear.</i>
The Boy and the Bird.....	<i>Unknown.</i>

WINTER TERM.

The Cloud	<i>Unknown.</i>
A Visit from St. Nicholas.....	<i>C. S. Morse.</i>
Hang Up the Baby's Stocking.....	<i>W. H. Lippincott.</i>

SPRING TERM.

The Little Lazy Cloud.....	<i>Unknown.</i>
The Baby	<i>Geo. Macdonald.</i>
The Boy's Song	<i>James Hogg.</i>
Sweet and Low	<i>Tennyson.</i>

THIRD GRADE.

FALL TERM.

Hiawatha's Childhood.....	<i>Longfellow.</i>
Little Moments.....	<i>Unknown.</i>
Kitty	<i>Marion Douglas.</i>

WINTER TERM.

The Child's World	<i>Unknown.</i>
Suppose My Little Lady.....	<i>Unknown.</i>
A Good Name.....	<i>Marcus Wilson.</i>

SPRING TERM.

Little by Little.....	<i>Unknown.</i>
The Brown Thrush.....	<i>Lucy Larcom.</i>
Seven Times One.....	<i>Jean Ingelow.</i>

FOURTH GRADE.

FALL TERM.

Boys Wanted.....	<i>Unknown.</i>
Little Brown Hands.....	<i>M. H. Krout.</i>
To-day.....	<i>T. Carlyle.</i>

WINTER TERM.

The Sculptor.....	<i>G. W. Doan.</i>
Somebody's Mother.....	<i>Unknown.</i>
The Children's Hour.....	<i>Longfellow.</i>

SPRING TERM.

Hiawatha's Sailing.....	<i>Longfellow.</i>
The Fountain.....	<i>Lowell.</i>

FIFTH GRADE.

FALL TERM.

The Vicar's Sermon.....	<i>Chas. MacKay.</i>
The Village Blacksmith.....	<i>Longfellow.</i>
The Landing of the Pilgrims.....	<i>Mrs. Hemans.</i>
The Arrow and the Song.....	<i>Longfellow.</i>

WINTER TERM.

One by One.....	<i>Adelaide A. Proctor.</i>
How Sleep the Brave.....	<i>Will Collins.</i>
Break, Break, Break.....	<i>Tennyson.</i>

SPRING TERM.

The Barefoot Boy.....	<i>Whittier.</i>
Beautiful Things.....	<i>Unknown.</i>

MADISON PUBLIC SCHOOLS.

SIXTH GRADE.

FALL TERM.

Psalm of Life.....	<i>Longfellow.</i>
Independence Bell.....	<i>Unknown.</i>
The Last Leaf.....	<i>Holmes.</i>
Ring Out, Wild Bells.....	<i>Tennyson.</i>

WINTER TERM.

The Builders.....	<i>Longfellow.</i>
Breathes There a Man.....	<i>Scott.</i>
The First Snowfall.....	<i>Lowell.</i>

SPRING TERM.

The American Flag.....	<i>J. R. Drake.</i>
Hunting Song.....	<i>Scott.</i>
The Four Lakes of Madison.....	<i>Longfellow.</i>

SEVENTH GRADE.

FALL TERM.

Sparticus to the Gladiators.....	<i>Elijah Kellogg.</i>
Sweet is the Pleasure.....	<i>Unknown.</i>
Alfred the Great to His Men.....	<i>J. S. Knowles.</i>
The Chase.....	<i>Scott.</i>
Soldier Rest.....	<i>Scott.</i>

WINTER TERM.

The Ship of State.....	<i>Longfellow.</i>
What Constitutes a State.....	<i>Sir Wm. Jones.</i>
Gradatim, or Round by Round.....	<i>J. G. Holland.</i>
The National Flag.....	<i>Charles Sumner.</i>

SPRING TERM.

Nobility.....	<i>Alice Cary.</i>
Flowers.....	<i>Longfellow.</i>
Crossing the Bar.....	<i>Tennyson.</i>
Clear the Way.....	<i>Unknown.</i>

EIGHTH GRADE.

FALL TERM.

An Appeal to Arms.....	<i>Patrick Henry.</i>
Warren's Address.....	<i>John Pierpont.</i>
Song of Marion's Men.....	<i>Bryant.</i>
Old Ironsides.....	<i>Holmes.</i>
The Chambered Nautilus.....	<i>Holmes.</i>
To a Water-fowl.....	<i>Bryant.</i>

WINTER TERM.

Liberty and Union.....	<i>Daniel Webster.</i>
Snow-Bound (The Snow Storm).....	<i>Whittier.</i>
Thanatopsis.....	<i>Bryant.</i>
Address at Gettysburg.....	<i>Lincoln.</i>

SPRING TERM.

Mercy (Portia to Shylock).....	<i>Shakespeare.</i>
A Man's a Man for a' That.....	<i>Burns.</i>
The Blue and the Gray.....	<i>Francis M. Finch.</i>
What is so Rare as a Day in June.....	<i>Lowell.</i>

SELECTIONS TO BE READ TO PUPILS.

FIRST AND SECOND GRADES.

FALL TERM.

Over in the Meadow	<i>O. A. Wordsworth.</i>
Lady Moon	<i>Lord Houghton.</i>
What Are You Good For	<i>Emily Miller.</i>
Lady Bird, Lady Bird	<i>C. B. Southey.</i>
Pussy's Class	<i>May M. Dodge.</i>
If You Please	<i>M. Douglas.</i>
Kitty and Mousie	<i>P. Moran.</i>
Wishing	<i>Wm. Allingham.</i>
The Tree	<i>B. Bjornson.</i>
Santa Claus and the Mouse	<i>Unknown.</i>

WINTER TERM.

The Little Angel	<i>Elizabeth Prentiss.</i>
Is It You	<i>Unknown.</i>
The Four Winds	<i>Kings.</i>
A Valentine	<i>Unknown.</i>
A Little Goose	<i>E. S. Turner.</i>
Marjorie's Almanac	<i>T. B. Aldrich.</i>
The Winds and the Leaves	<i>Unknown.</i>
All Things Bright and Beautiful	<i>Mrs. Alexander.</i>

SPRING TERM.

Little by Little	<i>Unknown.</i>
Pitter, Patter	<i>Unknown.</i>
Little Gustava	<i>C. Thaxter.</i>
Cheerfulness	<i>Marion Douglas.</i>
Who Stole the Bird's Nest	<i>L. Child.</i>
I am Coming, Little Maiden	<i>Mary Howitt.</i>
Good Night and Good Morning	<i>Lord Houghton.</i>
The Months	<i>Unknown.</i>
Rain Drops	<i>Unknown.</i>
Little Birdie	<i>Tennyson.</i>

COURSE OF STUDY.

91

THIRD GRADE.

FALL TERM.

Little Mamma.....	<i>Chas. Webb.</i>
Kept In.....	<i>Ethel Beers.</i>
The Kitten and the Falling Leaves.....	<i>Wordsworth.</i>
Thanksgiving Day	<i>Lydia Child.</i>
Little Bell.....	<i>T. Westwood.</i>
The Mountain and the Squirrel	<i>Emerson.</i>
The Silver Bird's Nest.....	<i>H. F. Gould.</i>
The Johnny Cake.....	<i>Whittier.</i>
Which Loved Best.....	<i>J. Allison.</i>

WINTER TERM.

The Tiger	<i>Wm. Blake.</i>
The Chatterbox.....	<i>Jane Taylor.</i>
Little Drops of Water.....	<i>Unknown.</i>
Father's Coming	<i>Mary Howitt.</i>
Little Foxes and Little Hunters	<i>Unknown.</i>
Sleigh Song.....	<i>G. W. Petter.</i>
The Fairy Artist	<i>Unknown.</i>
The New Year's Eve.....	<i>Hans C. Andersen.</i>

SPRING TERM.

Calling Them Up.....	<i>Mara L. Pratt.</i>
Rain Drops.....	<i>Unknown.</i>
Miss Willow.....	<i>Mara L. Pratt.</i>
Jack in the Pulpit.....	<i>C. Smith.</i>
The Fainting Blue-Bell.....	<i>Unknown.</i>
Little Dandelion	<i>H. B. Bostwick.</i>
The Lilac	<i>C. D. Bates.</i>
Grace and Her Friends	<i>Lucy Larcom.</i>

FOURTH GRADE.

FALL TERM.

The Brook.....	<i>Tennyson.</i>
A Wonderful Thing is a Seed.....	<i>Unknown.</i>
Casabianca	<i>Mrs. Hemans.</i>
The Singing Lesson.....	<i>Jean Ingelow.</i>
November	<i>Unknown.</i>
The River.....	<i>Unknown.</i>
The Eagle	<i>Tennyson.</i>
In School Days	<i>Whittier.</i>
Ring Out The Old	<i>Unknown.</i>
Little and Great	<i>Unknown.</i>
Daffydowndilly	<i>Anne M. Pratt.</i>

WINTER TERM.

The Frost.....	<i>W. Gould.</i>
Over and Over Again.....	<i>Josephine Pollard.</i>
Baby's Shoes	<i>W. C. Bennett.</i>
The Children.....	<i>Chas. M. Dickinson.</i>
The Skater's Song	<i>Rev. E. Peabody.</i>
Seven Times Two.....	<i>Jean Ingelow.</i>
Farewell Advice	<i>Chas. Kingsley.</i>
In the Tower	<i>Susan Coolidge.</i>

SPRING TERM.

The Voice of the Grass	<i>S. Roberts.</i>
What the Burdock was Good For	<i>A. S. R.</i>
Polley's Pansies.....	<i>J. W. Benham.</i>
The Voice of Spring.....	<i>Mrs. Hemans.</i>
The Violet.....	<i>Jane Taylor.</i>
Robert of Lincoln	<i>Bryant.</i>
Mrs. June's Prospectus	<i>Susan Coolidge.</i>

FIFTH GRADE.

FALL TERM.

God Bless Our Stars Forever	<i>B. F. Taylor.</i>
An Order for a Picture	<i>Alice Cary.</i>
The Stormy Petrel	<i>Barry Cornwall.</i>
In Swanage Bay	<i>Dinah M. Muloch.</i>
Death of the Flowers	<i>Longfellow.</i>
The Grasshopper and the Cricket.....	<i>Leigh Hunt.</i>
Labor is Worship.....	<i>Francis S. Osgood.</i>
Sowing and Harvesting.....	<i>Emily S. Oakey.</i>
Death of the Old Year.....	<i>Tennyson.</i>

WINTER TERM.

The Wreck of the Hesperus.....	<i>Longfellow.</i>
To the Falls of Niagara	<i>J. S. Buckingham.</i>
Fifty and Fifteen	<i>Unknown.</i>
A Prairie Dog Village	<i>Edward B. Nealy.</i>
The Captain's Daughter	<i>J. F. Fields.</i>
Perseverance	<i>R. L. Andros.</i>
The Shell.....	<i>Tennyson.</i>

SPRING TERM.

Narcissus.....	<i>Dart Fairthorne.</i>
The Birds	<i>Mary Howitt.</i>
Roses or Rue	<i>Unknown.</i>
To the Skylark	<i>Shelley.</i>
Rain in the Summer.....	<i>Longfellow.</i>
The Brave Old Oak.....	<i>H. F. Shorley.</i>
Under the Greenwood Tree	<i>Shakespeare.</i>
The Bugle Song.....	<i>Tennyson.</i>
Driving Home the Cows.....	<i>Unknown.</i>

SIXTH GRADE.

FALL TERM.

St. Lawrence River	<i>Unknown.</i>
Queen of the Antilles.....	<i>Mary B. Clarke.</i>
Bingen on the Rhine	<i>Caroline Norton.</i>
The Skeleton in Armor	<i>Longfellow.</i>
The Death of Napoleon.....	<i>J. McCullum.</i>
Drifting	<i>T. B. Read.</i>
Leak in the Dyke.....	<i>Phoebe Cary.</i>
Charge of the Light Brigade	<i>Tennyson.</i>
The Mistletoe Bough	<i>Thos. H. Bayly.</i>

WINTER TERM.

Hoendlinden	<i>Thos. Campbell.</i>
The Inch Cape Rock.....	<i>Robert Southey.</i>
Herve Riel	<i>Robert Browning.</i>
Legend of Bregenz.....	<i>Adelaide Proctor.</i>
Arnold Winklereip	<i>J. Montgomery.</i>
Horatius at the Bridge	<i>Thos. Macaulay.</i>
Melrose Abby	<i>Scott.</i>
Marco Bozarris.....	<i>F. G. Halleck.</i>
Dying Gladiator	<i>Byron.</i>
Poland	<i>Thos. T. Campbell.</i>
Incident of the French Camp.....	<i>Robert Browning.</i>

SPRING TERM.

Hymn Before Sunrise	<i>Sam T. Coleridge.</i>
Pegasus in Pound	<i>Longfellow.</i>
Death of Leonidas.....	<i>Geo. Croly.</i>
The Palm Tree.....	<i>Whittier.</i>
The Leap of Roushan Reg	<i>Longfellow.</i>

SEVENTH GRADE.

FALL TERM.

Ninety-nine in the Shade.....	<i>Rossiter Johnson.</i>
Four Leaved Clover	<i>Unknown.</i>
Address to a Mummy.....	<i>H. Smith.</i>
Dickens in Camp	<i>Bret Harte.</i>
Forty Years Ago.....	<i>Unknown.</i>
Turn Fortune, Turn Thy Wheel	<i>Tennyson.</i>
The Old Man Dreams.....	<i>Holmes.</i>
The Cloud.....	<i>Shelley.</i>
The Pen.....	<i>Lytton.</i>

WINTER TERM.

Abou Ben Adhem	<i>Leigh Hunt.</i>
The Festal Board.....	<i>Unknown.</i>
The Bells.....	<i>Edgar A. Poe.</i>
Parting of Marion and Douglas	<i>Scott.</i>
Bruce and the Spider.....	<i>Bernard Barton.</i>
The Rainy Day.....	<i>Longfellow.</i>
The Spacious Firmament on High.....	<i>F. Addison.</i>

SPRING TERM.

Elizabeth, Aged Nine.....	<i>M. E. Sangster.</i>
The Witch's Daughter	<i>Whittier.</i>
Courtship of Miles Standish.....	<i>Longfellow.</i>
The Honey Bee	<i>Unknown.</i>
The Birds of Killingworth	<i>Longfellow.</i>
The Moss Rose.....	<i>Krummacker.</i>
To a Skylark.....	<i>Shelley.</i>
The Gladness of Nature.....	<i>Bryant.</i>
Birds	<i>Eliza Cook.</i>

EIGHTH GRADE,

FALL TERM.

Paul Revere's Ride.....	<i>Longfellow.</i>
Nathan Hale.....	<i>F. M. Finch.</i>
Andre's Last Request.....	<i>N. P. Willis.</i>
Roll Call.....	<i>N. G. Shepherd.</i>
The One Hoss Shay.....	<i>Holmes.</i>
The Raven.....	<i>Edgar A. Poe.</i>
The Slave in the Dismal Swamp.....	<i>Longfellow.</i>
The Brave at Home.....	<i>Thos. B. Read.</i>

WINTER TERM.

The Slave Ship.....	<i>Whittier.</i>
How Old Brown Took Harper's Ferry.....	<i>E. C. Stedman.</i>
Barbara Freitchie.....	<i>Whittier.</i>
The Cumberland.....	<i>Longfellow.</i>
Kentucky Bell.....	<i>C. F. Woolson.</i>
Abraham Lincoln.....	<i>Lowell.</i>
Sheridan's Ride.....	<i>Thos. B. Read.</i>
The Black Regiment.....	<i>G. H. Baker.</i>
The Picket Guard.....	<i>Coyle.</i>

SPRING TERM.

Custer's Last Charge.....	<i>F. Whittaker.</i>
The Vagabonds.....	<i>J. T. Trowbridge.</i>
The Cry of the Children.....	<i>Mrs. Browning.</i>
The Boys.....	<i>Holmes.</i>
Among the Rocks.....	<i>Browning.</i>
Elegy Written in a Country Churchyard.....	<i>Gray.</i>
The Deserted Village.....	<i>Goldsmith.</i>

OUTLINE OF ORAL LESSONS IN GEOGRAPHY.

SECOND GRADE.

I. Lessons in color, form, size. Simple exercises in place, using objects to illustrate such terms as *up, down, on, above, before, between, under, below, behind, around.*

II. The application of geographical terms to the features of the landscape. A moulding board and pictures are helpful here.

III. Points of compass as determined by the sun. Have children give the direction of objects from one another in the school room. Tell how one may find the directions in the day-time, and on a bright night; how sailors tell directions. Establish a meridian line in the school room.

IV. Plants. 1. Trees, kinds and identification by wood, leaves, bark, and general appearance. 2. Fruits, identification and use. 3. Cultivated crops, identification and use.

V. Animals, wild and domestic. 1. Birds, names of those common to the locality, identification by plumage and song. 2. Fishes, names of those common. 3. Usefulness of all animals.

VI. Sky. Clouds, rain, snow, mist, fog.

THIRD GRADE.

FALL TERM.

I. Lessons in size. 1. Exercises in estimating length by the eye, and with the ruler, using objects in the room. 2. Teach the table of Linear Measure as far as needed. 3. Draw by scale a plan of the school room, the school yard, a city block, showing that the maps, or outlines, represent the surface as a bird would see it from above. 4. Estimate distance, using different points and objects in the city and its surroundings. 5. By comparison develop ideas of *area* and *scale*. In map drawing always use some definite scale.

II. Carefully study the natural features of the locality to develop correct mental pictures of rivers, mountains, plains, lakes, the ocean, etc.

III. Recognize in manufactured products the result of the occupations of men. Name different occupations in the vicinity; the materials used in them; the power used.

WINTER TERM.

I. Continue work in drawing and in interpreting maps of the school yard, city block and city, locating the principal streets and buildings always using a definite scale.

II. Continue study of the natural features of the locality. Rivers—source, bed, branches, banks, current, where water comes from, use in drainage, etc.

III. Study globe,—simple lessons to teach that the earth is round, turns around; surface composed of land and water; the names of the grand divisions of each.

IV. Interpretation of the symbols of the map.

SPRING TERM.

I. Map of the grand division of North America, so printed as to show relief. Location of its mountains and plains. Show that its general outline and the direction of its rivers depend upon the location and direction of its mountains. Name and locate its rivers, lakes, the oceans, that border it, its great indentations and projections.

II. Develop idea of political division. Teach the political divisions of North America; that is, associate the name with the form and location. In the same way teach the political divisions of the United States; locate the capital and two or three important cities in each state. Use a dissected map. Give ideas of comparative area.

FOURTH GRADE.

FALL TERM.

I. Geography of Wisconsin. Use outline map drawn upon the black board; scale ten miles to an inch.

1. Size,—length and breadth.
2. Boundaries.
3. Locate three of the principal rivers, and show the slope of the surface drained by each; also locate three lakes of the interior.

4. With colored crayon represent the prairie lands, timber lands, and mineral sections.
5. Locate and discuss some of the leading industries.
6. Locate ten cities; journeys between them by rail and water. Use railroad map.
7. Name and locate counties by help of dissected map.

WINTER TERM.

I. Teach the square mile or "section." Draw a "section map" of Dane county. Teach its area. Using the "section lines," divide it into towns. Teach their names and location. Teach the surface and drainage of the county; locate its chief cities and villages. Review occupations and their products, and trace lines of transportation through the county. Review important points in geography of Wisconsin and United States. Use Geographical Readers. Study map of South America.

SPRING TERM.

I. Study map of the grand divisions that indicate relief in the following order: Africa, Australia, Europe, Asia. Teach the location of the mountains and plains of each; show that outline and direction of rivers are determined by location and direction of mountains. Name and locate their rivers, lakes, the oceans that border them, their great indentations and projections.

SUGGESTIONS AND OUTLINES ON HISTORY.

IN ELEMENTARY GRADES.

The history work of the lower grades should be made so interesting that the pupil's love of reading what is true and valuable will be fostered. As the pupil passes from grade to grade the subject matter taught should be made more and more a means of mental discipline,—training in habits of reflection and determining motives.

The stories should at first be told or read by the teacher. Constant use should be made of the pictures representing the situation of the stories. A little later the pupil under the direction of the teacher and with the references carefully arranged, may learn to gather information for himself. When pupils are thoroughly filled with the subject they will be eager to tell what they know. In this way valuable results are attained in the way of language work. Pupils should not feel that these are task lessons; hence from time to time stories may be read or told to them with no thought of having them reproduced. The aim should be to interest the pupil, to carry him beyond the commonplace, to arouse his fancy, and to call up in his mind vivid mental pictures.

The work in history should be closely associated with the work in geography. From the third year every event should be located on the map. As the growth of history is largely the result of geographical condition, it is important that children should early begin to cultivate the habit of associating every fact of history with its peculiar physical environment. Constant reference should therefore be made to the map until the pupils never think of reading history without having one before them. It is only in this way that knowledge of history can become definite and vivid.

The following books will be found helpful to both teachers and pupils: Pratt's American History Stories, Monroe's Story of Our Country, Eggleston's First Book in American History, Wright's Children's Stories in American Progress, Gilman's Historical Readers, Montgomery's The Beginner's American History, Thwaites' Historic Waterways, Thwaites' History of Wisconsin, McMurry's Pioneer His-

toric Stories of the Mississippi Valley, Aunt Charlotte's Stories of Roman History, Lang's Heroes of the Seven Hills, Bonner's Child's History of Rome, Beesley's Stories from the History of Rome, Bonner's Child's History of Greece, Cox's Tales of Ancient Greece, Lanier's Boy's King Arthur, Hanson's Stories from King Arthur, Edgar's Crusades and Crusaders, Lanier's Boy's Frissart, Buckley's History of England for Beginners, Calcott's Little Arthur's History of England. A Pathfinder in American History, published by Lee & Shepard, is especially helpful to all teachers of history.

TOPICS.—THIRD GRADE.

Stories.—Columbus, Americus Vesputius, Balboa, Cortez and Montezuma, Pizarro and the Incas, De Soto and the Mississippi, Drake, Raleigh and Queen Elizabeth, Magellan's Voyage Around the World.

FOURTH GRADE.

FALL TERM.

Stories of the History of Wisconsin.—I. Discoveries of Nicolet, Joliet, Marquette, Hennepin, La Salle, Charlevoix.

II. Settlement of missions at La Pointe, De Pere, and Green Bay.

III. Stories of customs and manners of the Indians.

IV. Winnebago War of 1827: Conduct of Red Bird at Prairie du Chien; skirmish at Bad Axe; surrender near portage; treaty.

V. Black Hawk War of 1832: Black Hawk and his wrongs; Battles of Pecatonica, Wisconsin Heights, Bad Axe; Capture of Black Hawk.

VI. Mounds, location, age, etc.

WINTER TERM.

Pioneer Stories of the Mississippi Valley.—La Salle, Geo. R. Clark, Lincoln, Joliet and Marquette, Hennepin, The Sioux Massacre, Daniel Boone, Robertson, Marietta and Cincinnati, Lewis and Clark, Fremont.

SPRING TERM.

Stories from Roman History.—Romulus and Remus, The Seizure of the Sabine Woman, Tarpeian Rock, Fight of the Horatii and the Curiatii, Expulsion of the Etruscan Kings, Horatius at the Bridge, Cori-

olanus, Story of the Sacred Geese, Why Manlius condemns his son to death, How Hannibal crossed the Alps and fought in Italy, Siege of Carthage, Devotion of Carthaginian Women, Scipio, Regulus. The Grachi, Cataline, Cæsar, Birth of Christ, Nero.

FIFTH GRADE.

FALL TERM.

Colonization.—John Smith, Pocahontas, The Mayflower and the Pilgrims, Miles Standish, Roger Williams, William Penn, The Settlement of Connecticut, The Pequot War, King Phillip's War, The Indians, The Dutch at New Amsterdam, Importation of Slaves.

WINTER TERM.

Stories of the French and Indian War.—Washington's Journey through the Wilderness, How Washington built Ft. Necessity, Death of Gen. Braddock, Expulsion of the Arcadians, Story of Evangeline, Wolf at Quebec, The Indian Chief Pontiac.

SPRING TERM.

Revolutionary Period.—Boston Tea Party, Paul Revere, Battles of Concord and Lexington, Washington Crossing the Delaware, La Fayette, Israel Putnam, Benjamin Franklin and the Lightning Rod, Arnold the Traitor and Andre the Spy, Surrender of Cornwallis.

SIXTH GRADE.

FALL TERM.

The Republic.—Eli Whitney and the Cotton Gin, Daniel Boone and the Indians, Thos. Jefferson, Fulton and the Steamboat, the Railroad, Morse and the Telegram, Story of Mad Anthony Wayne, Commodore Perry, Fugitive Slave, Anthony Burns, John Brown's Raid.

WINTER TERM.

Greek and Roman History.—Aristotle, Pericle, Lycurgus, The Spartan Boy who stole the Fox, Miltiades, Leonidas, Diogones, Philip of Macedon, Alexander the Great, Socrates, Demosthenes, Morality of Cato, Cincinnatus, Brutus, Pompey, and other stories given in fourth grade.

SPRING TERM.

Chivalry.—King Arthur, Guinevere, Sir Lancelot, Sir Tristram, Tales of King Edward the Third, Robert Bruce of Scotland, Sir Henry of Flanders, Earl of Derby, Chevalier du Bayard, Sir Philip Sydney.

Crusades.—Stories of the Tomb of Christ and the Turks. Stories illustrating the purpose of the Crusades, Richard the Lion-hearted, Peter the Hermit, Godfrey of Bouillon, Frederic Barbarossa, Siege of Antioch, the Children's Crusade.

SEVENTH GRADE.

WINTER TERM.

I. Civil Government.—State, county, city.

II. Stories from the History of England.—The Ancient Britons, Julius Cæsar's Conquest of Britain, Anglo-Saxon Conquest, The Christians, Norman Conquest, Hundred Years' War, War of the Roses, The Tudor Kings, The Stuart Kings and Elizabeth Revolution, The Georges, Queen Victoria. The teacher must use judgment in selecting the most interesting events and grouping them about central heroic characters.

III. The Original Inhabitants of America.—Mound Builders, Cliff Dwellers, Indians.

SPRING TERM.

I. Explorers and Discoverers.—Spanish, English, French.

II. Colonization.—The English in America. The French in America.

EIGHTH GRADE.

FALL TERM.

The Revolution and the Critical Period.—Causes of the Revolution; The Revolution; Life and Society in Colonial Times; Colonial Government; The Critical Period and the Constitution.

Administrations—

I. Washington.—Political Parties; Financial Measures; Troubles with England and Jay's Treaty; The Cotton Gin.

II. John Adams.—Trouble with France; Alien and Sedition Laws; Death of Washington.

III. Jefferson.—War with Tripoli; Difficulties with France; Purchase of Louisiana; Embargo Act; Burr; Fulton and the Steamboat.

IV. Madison.—Causes of the War with England; Chief Engagements; Growth of Navy; Results of the War; Death of the Federal Party.

WINTER TERM.

Administrations continued—

V. Monroe.—Missouri Compromise; Monroe Doctrine; Purchase of Florida; New Parties.

VI. John Q. Adams.—Protective Tariff; Public Improvements; Pension Bureau.

VII. Jackson.—Jackson's character and His Course with Regard to Office Holders; U. S. Bank Nullification; Vetoes; Internal Improvements; Foreign Affairs; New Parties.

VIII. Van Buren.—Anti-Slavery Agitation; Ashburton Treaty; Panic of '37; Sub-Treasury Scheme.

IX-X. Harrison and Tyler.—Morse and the Telegraph; Annexation of Texas.

XI. Polk.—Mexican War; Causes, Result; Discovery of Gold in California.

XII-XIII. Taylor and Fillmore.—Slavery Agitation; Wilmot Proviso; Compromise of 1850; Fugitive Slave Law.

XIV. Pierce.—Repeal of Missouri Compromise; Kansas and Nebraska Act; Gadsden's Purchase.

XV. Buchanan.—The Dred Scott Decision; John Brown's Raid; Election of Lincoln; Secession of States and State's Rights Doctrine.

XVI. Lincoln.—The Civil War.

1. Preliminary Events.

2. Defense of Washington and the Capture of Richmond; Bull Run; Peninsula Campaign, together with Antietam and Gettysburg; Grant's Campaign.

3. The Blockade and Foreign Relations.

4. The Opening of the Mississippi; Forts Henry and Donaldson; Shiloh; New Orleans; Vicksburg.

5. The Negro Contraband and Emancipation; Emancipation Proclamation; Negro Soldiers and Exchange of Prisoners; Prison Life in the South; The Draft.

6. Sherman's Campaign in Georgia; Capture of Atlanta; March to the Sea.

7. Closing Events of the War.

SPRING TERM.

Administrations continued—

XVII. Johnson.—His Dispute with Congress; Impeachment; Thirteenth and Fourteenth Amendments; Purchase of Alaska; Sub-Marine Telegraph.

XVIII. Grant.—Re-admission of States; Fifteenth Amendment; Alabama Claims; Centennial Celebration.

XIX. Hayes.—Electoral Commission; Troops Withdrawn from the South; Railroad and Coal Strikes; Eads and the Mississippi; United States Paper Money and Gold.

XX-XXI. Garfield and Arthur.—Garfield's Assassination; Civil Service Reform; the Freedmen and Education.

XXII. Cleveland.—Civil Service Reform advanced; Labor Troubles; The Chicago Anarchists; Presidential Succession; Chinese Immigration; Inter-State Commerce Act.

XXIII. Harrison.—Settlement of Oklohoma; The Seal Fisheries; Difficulty with Chili; Six New States; The New War Ships.

General Review of Topics.—Slavery, State Sovereignty, Growth of Territory, Political Parties, Tariff, Civil Service Reform, Inventions, Means of Travel, Education, Literature.

Topics of Current Interest.—The Hawaiian Questions, Rebellion in Brazil, Behring Sea Question, Bluefield Incident, Conviction of Election Inspectors, Tariff Reform.

NATURE STUDY.

I. The object of nature study should be:

1. To interest the pupils in nature. The work should be so conducted as to inspire the children with a love for the beautiful, and with a sympathy for all living things. Children should be taught how to preserve and protect the plants, rather than how to dissect them.

2. To train and develop the children. The children should be trained to (a) observe, compare and express (see, reason and tell); (b) to investigate carefully, and to make clear, *truthful* statements; (c) to develop a taste for original investigation.

3. The acquisition of a knowledge of plants and animals.

II. Methods: The children must study plants or flowers, not about them, in books. They must be led to make their own unaided observations, and to express them. By questions, the teacher can lead to particular observations. The children's thoughts, concerning the flowers, may furnish subject matter for oral and written language lessons.

As busy work, the children should be led to trace and sketch leaf, stem, and root forms of some particular flower; to represent its color with paints; to write little stories about it; to make a number of sentences in regard to its leaves, petals, and sepals; to tell where it grew, how it grew, and when to look for it; to describe some incident connected with the flower or recalled by it.

In this manner nature study may contribute something to language, reading, spelling, drawing, painting, numbers, and geography.

In connection with this work, the teacher should relate or read to children stories about flowers, and from time to time have pupils memorize and recite short poems and selections relating to flowers and nature. Wordsworth's poem on the Daffodils, Barry Cornwall's on the Snowdrop, and many others will be found appropriate. Many quaint and curious stories connected with flowers may be related. The mythical origin of the hyacinth, the legend of the sacred lily, the financial disturbance in Holland caused by the tulip, will be found interesting.

OUTLINES OF WORK.

(First four grades.)

CENTRAL THOUGHT: CARE AND PROTECTION.

I. Seeds and Germination.

Let the children:

1. Plant beans and watch their growth.
2. When the seedlings are two or three inches high, study the seed and its parts.
3. Study the pea in a correspondingly way, and then compare it with the bean, noting first the differences and then the resemblances.
4. Study seed and plant, in each case, in relation to their surroundings, air, water, and sunlight. (Children should be lead to discover the uses of the different parts, first to the plant and then to animals and man.)
5. Continue the observations on the bean and pea during the remaining part of the school year, noting the development, use, and general structure of buds, stems, roots, leaves, and, if possible, of flowers and fruit.

II. Buds.

The study of buds should be carried on in connection with the work in germination suggested above.

Let the children:

1. Gather branches having large buds, such as the horse-chestnut, the elder, or the lilac; put them in water, watch them, and tell about their development and the gradual unfolding of their parts.
2. Study the stem and its parts, wood, bark, and pith, their uses and structure.
3. Later, study the fresh buds and compare them with those which have unfolded.
4. Compare the first bud studied with some other large bud.

III. Reproduction and Flowers.

In connection with the study of buds, call the attention of the children to the catkins of the willow, the poplar, and the hazel and then to the flowers of the elder, the lilac, and, if possible, of the bean and the pea.

Let the children:

1. Find dust-bearing (staminate) and seed-bearing (pistillate) flowers and parts of flowers. (This will give opportunity to develop the idea that flowers are for the production and protection of seeds.)

2. Study the dissemination of seeds that fly, as those of the dandelion and milkweed; seeds that sail, as those of the maple and the basswood; seeds that stick, as those of the burdock and the tick; seeds that fall, as those of the bean and the pea.

3. Study fruits. (They should learn the use of fruit to the plant and to man.)

As early as may seem wise, the teacher should develop, largely by stories and supplementary reading, the use of other parts of the plant to the seed and flowers.

IV. *Leaves.*

Let the children:

1. Watch the unfolding of the leaves in the bud, and notice their protection and arrangement, as suggested before.

2. Note the uses of leaves and their parts, stipules, stalk, and blade; and of veins, epidermis, breathing pores, and pulp. (In connection with the use of veins, they should study venation.)

3. Study the positions, arrangement, and parts of leaves with reference to their uses; their relation to sunlight, air, rain, and the directing of water to the roots.

4. Study the positions of leaves with reference to buds, and note the order and plan shown in bud and leaf.

By means of charts or blackboard outlines, to which pupils may constantly refer, they should be familiarized with the more common forms of the leaf as a whole, and of base, apex, margin, and should be trained to give orderly, exact, concise descriptions.

SUGGESTIONS.

The hardy bulbs are in some respects better adapted to the school-room than any other class of plants. Almost any catalogue offers at very low rates, collections of bulbs suitable for *forcing*, and contains hints in regard to their culture to insure against failure. To secure a succession of bloom, it will be well to start bulbs at intervals of about two weeks. To obtain flowers from bulbs before the close of the term in June, their growth must be forced by an abundance of moisture and heat.

In order that the growth of roots and the daily advance of each tiny rootlet may be noted, the following will be helpful:

(a) Grow two or three bulbs in water. For this purpose the hyacinth and Chinese sacred lily will be found most satisfactory.

(b) Place a piece of coarse netting across the mouth of a tumbler, push it down in the center, place seeds upon it, and keep covered with water.

(c) Cut four pieces of sheet batting to fit a plate, place two layers on the plate, arrange seeds on these, cover with the other two pieces, and keep well moistened. The power of root and rootlets to force their way through the cloth, and the raising of the upper layers by the stem and leaves, will awaken much interest.

The following books will be found helpful in this work:

Leaves and Flowers, by Mary A. Speers; How to Know the Wild Flowers, by Mrs. Wm. Starr Dana; Glimpses of the Plant World, by Fannie D. Bergen; The New Botany, by W. J. Beal; Concerning a Few Common Plants, by G. L. Goodale; Sea Side and Way-Side, No. 3

HIGH SCHOOL COURSES.

YEAR.	ENGLISH.	GENERAL SCIENCE.
I.	Algebra 5	Algebra 5
	Civil Government } 5	Civil Government } 5
	Physical Geography } 5	Physical Geography } 5
	Composition and Literature . . . 5	Composition and Literature . . . 5
	Music 2	Music 2
	Drawing 2	Drawing 2
	Rhetoricals 1	Rhetoricals 1
II.	General History 5	General History 5
	Rhetoric and Literature 5	Rhetoric and Literature 5
	Biology } 5	Biology } 5
	Physiology } 5	Physiology } 5
	Rhetoricals 1	Rhetoricals 1
III.	Physics 5	Physics 5
	Literature 5	German 5
	Arithmetic, 15 weeks } 5	Arithmetic, 15 weeks } 5
	Botany, 22 weeks } 5	Botany, 22 weeks } 5
	Shakespeare 2	Shakespeare 2
	Rhetoricals 1	Rhetoricals 1
IV.	Geometry 5	Geometry 5
	Literature, 15 weeks } 5	German 5
	U. S. History, 22 weeks } 5	English History, 15 weeks } . . . 5
	English History, 15 weeks } . . . 5	Political Economy, 12 weeks } . . 5
	Political Economy, 12 weeks } . . . 5	Psychology, 10 weeks } 1
	Psychology, 10 weeks } 1	Theory and Art, 10 weeks 1
	Theory and Art, 10 weeks 1	Rhetoricals 1
	Rhetoricals 1	

COURSE OF STUDY.

111

HIGH SCHOOL COURSES.

YEAR.	MODERN CLASSICAL.	ANCIENT CLASSICAL.
I.	Algebra 5 ✓ Civil Government } Physical Geography } 5 Latin 5 Music 2 Drawing 2 Rhetoricals 1	Algebra 5 Civil Government } Physical Geography } 5 Latin 5 Music 2 Drawing 2 Rhetoricals 1
II.	✓ General History 5 Caesar 5 { Biology . } Physiology } 5 Rhetoricals 1	General History 5 Caesar <i>4 Books</i> 5 Biology, 15 weeks } Greek, 22 weeks } <i>Physiology</i> 5 Rhetoricals 1
III.	✓ Physics 5 Cicero 5 German 5 Shakespeare 2 Rhetoricals 1	Physics 5 Cicero <i>7 orations</i> 5 Greek <i>White's Beginners Book</i> Shakespeare 2 Rhetoricals 1
IV.	✓ Geometry 5 Virgil 5 German 5 Shakespeare 2 Rhetoricals 1	Geometry 5 Virgil <i>6 books</i> 5 Greek <i>4 books Anabasis</i> - 3 books Shakespeare 2 Rhetoricals 1

Daniel

Daniel

Collins

HIGH SCHOOL GRADUATES.

CLASS OF 1875.

Archibald Durrie, Presbyterian Clergyman, Bismarck, N. D.

Charles Lamb, U. W. '80, Lawyer, Madison.

Oliver Ford.*

Howard Hoyt, U. W. Law, '81, Milwaukee.

Frank Huntington, Bookkeeper, St. Paul, Minn.

Charley Oakey, Osceola Mills.

Thomas Parr, U. W. '81.*

William Kollock, Wichita, Kan.

Edward B. Oakley, U. W. '79, Teacher, San Jacinto, Cal.

William Windsor, Phrenologist, Chicago, Ill.

Hattie O. Thoms, Teacher, Portland, Oregon.

Carrie H. Billings, Teacher, Chicago.

Ella Hickok, Madison.

Annie I. Horne (Mrs. W. A. Clapp), Wauwatosa.

CLASS OF 1876.

Henry B. Favill, U. W. '80, Rush '83, M. D., Chicago.

Alfred Patek, U. W. '80, Room 46 Tribune Bldg, New York, N. Y.

Henry Wilkinson, Chicago.

Stanley Proudfit, U. W. '81*

Charles Hudson, Mail Carrier, Madison.

George E. Morgan, U. W. '80, Law '82, Attorney, Kansas City, Kan.

Henry Mason, Garden City, Kan.

William E. Morgan, Physician, Chicago, Ill.

Willis Hoover, Missionary, South America.

Euphemia Henry (Mrs. T. J. McMaster), Dakota.

Sarah Dudgeon (Mrs. E. J. Baskerville), Madison, Wis.

Hattie Huntington (Mrs. McDonald), St. Paul, Minn.

Annette Nelson, Teacher, Milwaukee.

Stella Ford (Mrs. Chas. Abbott), Madison.

*Deceased.

Carrie French (Mrs. Gibbs), Madison.
Carrie R. Kellogg (Mrs. Brigham Bliss), St. Paul.
Margaret Coyne.*
Kittie Kelley, Madison.
Maria Dean, U. W. '88, M. D., Helena, Montana.
Lizzie Bright (Mrs. Frank Phoenix), Delavan, Wis.

CLASS OF 1877.

Anton Bjornson, U. W. '82, Ashley, N. Dak.
Wm. Lyon, U. W. '81, Edenvale, Hillsdale, Cal.
Willard Snell, Clerk, J. E. Moseley, Madison.
Charles H. Kerr, U. W. '81, Publisher, 175 Dearborn Street, Chicago.
Salmon Dalberg, U. W. '81, Law '83, Attorney, Milwaukee.
Edmund Burdick, 168 N. Main Street, Wichita, Kan.
Walter Chase, Madison.
James Young, Machinist, U. W., Madison.*
George Byrne, Lumber Dealer, Kansas City, Mo.
Howard L. Smith, U. W. '81, Law '85, Attorney, Chicago.
Frank Hyer.
Anna Butler, Superior.
Julia Clark, U. W. '81 (Mrs. J. W. Hallam), Sioux City, Iowa.
Lizzie Dresser (Mrs. Shaw).
Emma Bascom.*
Florence Bascom, U. W. '82-84. Professor Bryn Mawr.
Hattie Stout, Madison.
Fannie Hall.*
Jennie McMillan (Mrs. John T. Kelly), Milwaukee.
Colin Davidson, Clerk, Railroad Office, Omaha, Nebraska.
Minnie Hopkins (Mrs. Dewey), Boston, Mass.
Frankie Steiner (Mrs. F. Weil), Milwaukee.
Matie Noble.*
Jennie M. Williams, Teacher, Third Ward, Madison.

CLASS OF 1878.

Henry Pennock, U. W. '83, Real Estate Agent, Omaha.
Wendell Paine.*
William Oakey, Madison.
William Dodds, U. W. '82, E. P. Allis Co., Milwaukee.

* Deceased.

Walter B. Pearson, Contractor, Chicago.
Sarah Chambers, U. W. '82 (Mrs. C. A. Wilkin), Fairplay, Colo.
Lucy Gay, U. W. '82, Teacher of French, U. W.
Mary E. Storm, Teacher, Madison.

CLASS OF 1879.

August Umbriet, U. W. '83, Insurance, Milwaukee.
Julia Ray, U. W. '84 (Mrs. Jordan), Morris, Ill.
Rosa Fitch, U. W. '84 (Mrs. Albert Briggs), Madison.
Lillie Beecroft, U. W. '83, 669 Bedford Ave., Brooklyn, N. Y.
Mary Wright (Mrs. Oakey).
Alice Lamb, U. W. '84 (Mrs. M. Updegraff), Columbia, Mo.
Sarah Clark, U. W. '84 (Mrs. C. W. Cabeen), Portage.
Jennie Lovejoy.*

CLASS OF 1880.

Harry L. Moseley, U. W. '84, Law '87, Madison.
McClellan Dodge, U. W. '84, Civil Engineer, Madison.
Julius Burdick, Madison.
James J. Morgan, Chicago Medical College, '88, Physician, Chicago.
Louisa Davids, Sanborn, Iowa.
Rose Case (Mrs. Geo. Haywood), Madison.
Agnes Butler (Mrs. B. W. Snow), Madison.
Clara D. Baker, U. W. '84, (Mrs. W. H. Flett), Merrill.
Kittie Moody, Greely, Colo.
Mary L. Byrne (Mrs. C. S. Slichter) Madison.
Emily Prescott (Married), Nebraska.
Flora Mears, Madison.
Therese G. Cosgrove, Teacher, Fourth Ward, Madison.
Clarissa Gano (Mrs. Robert Lipsey), Normal Park, Ill.
Annie H. Durrie (Mrs. T. A. Goodwin), Helena, Mont.
Lucy Smith, 625 N. Lincoln Street, Chicago.
Nettie Smith, 625 N. Lincoln Street, Chicago.
Nellie Philips.
Kate McGill, Teacher, Madison.
Josephine Hausman, Madison.
Flora Pollard (Mrs. C. J. Batten), Chicago.
Fannie Langford (Mrs. L. B. Ring), Woodland Court, Milwaukee.

* Deceased.

CLASS OF 1881.

Robert Hendricks, Minneapolis, Minn.
Alice Lindestrom, Madison.
Lucy Herfurth (Mrs. C. N. Harrison), Baltimore, Md.
Mary E. Oakey, Madison.
Daisy Greenbank (Mrs. F. W. Dustan), Ashland.
Fanny Ellsworth, Madison,
Jessie Partridge.*
Emma Smith, Nebraska.
Helen Bjornson (Mrs. Swenson), Madison.
Rosa Dengler, Teacher, Madison.
Lizzie McMillan.*
Fredericka Bodenstein Teacher, Madison.
Grace Clark, U. W. '85 (Mrs. F. K. Conover), Madison.

CLASS OF 1882.

Elmer Coombs, Clinton, Wis.
Mary R. Edgar, Principal First Ward, Madison.
Elizabeth Cutler, Teacher, Madison.
Minnie Gill, Madison.
Elizabeth Heney, in a Convent, Chicago.
Mary Connor, Token Creek, Wis.
Lillie Clement.
Kate Devine.*
Jessie R. Lewis (Mrs. Loyd Skinner), Eau Claire, Wis.
Lelia Dow, Madison, Wis.
Maggie Robb, San Francisco, Cal.

CLASS OF 1883.

William Rosenstengel, U. W. '87, Electrician, Toronto, Can.
Albert Rundle, U. W. Law, '90.
Daisy Beecroft, 669 Bedford Ave., Brooklyn, N. Y.
Frankie Brooks (Mrs. Plummer), St. Paul.
Mary Farley.
Nellie Jewett.
Libbie Klusmann, Proof-reader, State Journal.
Etta Patterson (Mrs. A. J. Klumb), Milwaukee.

*Deceased.

Louisa Ambrecht, Madison.
Eleanor Crowley.
Fanny Gay (Mrs. Chas. W. Lomas), Ft. Howard.
Emma G. Hyland, Teacher, Madison.
Emma Deards (Mrs. Sutherland), Madison.

CLASS OF 1884.

Addie Lindley (Mrs. Reid), Merrill.
Annie Hauk (Mrs. John Mader), Milwaukee.
Julia Dahlberg, Teacher, Milwaukee.
Inger Conradson, Teacher, Brooklyn.
Ida Herfurth, Stenographer, Madison.
Alice Rodermund *
Sophie M. Lewis (Mrs. H. E. Briggs), U. W. '88, Madison.

CLASS OF 1885.

Lillie D. Baker (Mrs. Ernest A. Warner), U. W. '89, Madison.
James B. Kerr, U. W. '89, Law '92, St. Paul.
Anna A. Nunns, U. W. '89, Historical Library.
Olive E. Baker, U. W. '91, Teacher, H. S. Madison.
Lenore L. Totto, Milwaukee.
Sophy S. Goodwin, U. W. '89, Madison.
Sue G. Tullis, U. W. '89, Teacher, High School, Madison.
Blanche L. Rider (Mrs. Wm. Harrington), Madison.
Alice Goldenberger, U. W. '91, Madison,
Jennie A. Jones (Mrs. E. Derge), Emporia, Kan.
Delia A. Kelly, Madison.

CLASS OF 1886.

William Anderson.*
Eldon J. Cassoday, U. W. '90, Law '92, Chicago.
Charles M. Mayers, Insurance Agent, Madison.
Ben C. Parkinson, U. W. '90, Law '94, Milwaukee.
Henry G. Parkinson, U. W. '90, Law '94, Fond du Lac.
Kittie M. Bruce, Teacher of Music, Studying in Europe.
Robert C. Burdick, Madison.
Mary F. Carpenter, Madison.

*Deceased.

Emma L. Dowling, Madison.
Lelia M. Gile, Teacher, Madison.
Rollin C. Hill, Madison.
Frances A. Kleinpell, U. W. '90, Teacher, Lancaster.
Grace A. Lamb, U. W. '91, Madison.
Florence M. Smith (Mrs. A. M. Story), Hillsborough, New Mexico.
Zilpha M. Vernon, U. W. '90, Asst. Librarian, Madison.
Nora Culligan, Teacher, Madison.
Margaret A. Foren, Teacher, Fifth Ward, Madison.
Outillia Stein (Mrs. P. H. Brodesser), Milwaukee.
Anna E. Tarnutzer, Teacher, Madison.

CLASS OF 1887.

Andrews Allen, U. W. '91, Draughtsman, Wilmington, Del.
Bessie Cox, Madison.
Fayette Durlin, Madison.
Marion T. Janeck (Mrs. Richter), U. W. '91, Madison.
Paul S. Richards, Philadelphia, Pa.
Ellie May Sanborn, (Mrs. Robert Kyle), U. W. '91, Tomah.
Elsbeth Veerhusen, U. W. '91, Teacher, Madison.
Florence E. Baker, U. W. '91, Historical Rooms, Madison.
Charles A. Dickson, U. W. '91.
Bertha M. Mayer, Madison.
Thomas K. Erdahl, U. W. '91, Teacher, Menomonie, Wis.
Augusta J. Bodenstein (Mrs. Paul Findlay), Madison.
John F. Donovan, Lawyer, Madison.
Carl A. Johnson, U. W. '91, Mech. Eng., Madison.
Arthur F. Oakey, U. W. '91, Madison.
Carrie M. Smith (Mrs. Williamson), Madison.
Frederick Wm. Adamson, U. W. '91, Chicago Med. Col., '93, Milwaukee.
Lewis A. Bender, Oconomowoc.
Sarah E. Gallagher, Madison.
Daisy D. Lindley (Mrs. James Goldworthy), Prescott.
Oscar F. Minch, Madison.
William F. Ellsworth, Chicago.
Elizabeth M. Henwood, Madison.
Rose M. Minch, Madison.
Helen L. Winter, Teacher, Madison.
Calvin Z. Wise, Madison.
George G. Thorp, Mech. Eng., U. W. '91, Chicago.

CLASS OF 1888.

Helen G. Thorp (Mrs. John Nicolson), U. W. '92, Pittsburg.
Henrietta Kleinpell, Teacher, Deerfield.
John H. McNaught, Civil Engineer, Milwaukee.
Henry H. Morgan, Lawyer, Madison.
Annie Bremer, Madison.
Samuel Lamont, Madiakon.
Carletta Anderson (Mrs. Peter Vedel), Chicago.
Samuel Piper, U. W. '94, with Piper Bros., Madison.
Mabel Fleming, Milwaukee.

CLASS OF 1889.

Mary B. Baker (Mrs. F. W. Dickinson), Detroit, Mich.
Martha S. Baker, U. W. '93, Teacher, Bayfield.
Frances M. Bowman, U. W. '93, (Mrs. Jesse Sarles), Necedah.
Catherine M. Brown, U. W. '93, Madison.
Theresa M. Byrne.
Bertha Cassoday (Mrs. C. A. Johnson), Madison.
Wilfred E. Chase, Madison.
Biondella R. Clark, Teacher, Cambridge.
Margaret A. Cunningham.*
Lucius H. Davidson, Madison.
Ella Davis, U. W. '93, Teacher, Tomah.
Elizabeth Donoughue (Mrs. Oakey), Madison.
Myrtle H. Dow, New York City.
Charles H. Doyon, U. W. '93, Sioux Falls, S. D.
Fred R. Estes, U. W. '93.
Julia K. Fischer, Paoli.
William Fitch, Madison.
George Edward Gernon, U. W. '94, Madison.
Alice E. Hawkins, Madison.
Hannah Herfurth (Mrs. Murray), Madison.
Sabena Herfurth, U. W. '93, Madison.
Robert E. Jones.*
Minnie Luebkeman, Madison.
Mary H. Main, Madison.
Helen L. Mayer, U. W. '93, Teacher, Milwaukee.
Mary L. Murray, U. W. '93, Madison.

*Deceased.

Emma A. Nelson, Teacher, Madison.
Anna I. Oakey, U. W. '93, Teacher.
Grace V. Reynolds, Madison.
Louis D. Sumner, U. W. '93, Pharmacy '94, Druggist, Madison.
Emma Sitterly, Teacher, Madison.
Mary E. Smith, U. W. '93, Madison.
Charles Thuringer, Civil Eng., U. W. '93.
William E. Swain, Madison.
Amy R. Young, Madison.

CLASS OF 1890.

William W. Allen, U. W. '94, Madison.
Lizzie Armstrong, Madison.
May Belle Bryant, Teacher, near Madison.
Mary C. Cramer, M. C., U. W. '95.
Charles Davison, U. W. '94, Lawyer, Beaver Dam.
Elizabeth Foren, U. W. '94.
Theodore Herfurth, Insurance Agent, Madison.
Grace L. Hopkins, U. W. '94 (Mrs. Harry Kellogg), Milwaukee.
Mary A. Kellogg, Madison.
Helen J. Kellogg, U. W. '96.
Louise Kingsley (Mrs. Parke), Lodi, Wis.
Irma M. Kleinpell, U. W. '94.
Walter Kleinpell, Chicago.
Cornelius Knudson, Bookkeeper, Madison.
Dena Lindley, U. W. '94, Madison.
Stephen A. Madigan, U. W. '95.
William C. McNaught, Madison.
Thomas Nelson, U. W. '94, Madison.
Washington Oakey, Dental College, Chicago.
Susie P. Regan, U. W. '94, Madison.
Rudolph R. Rosenstengel, U. W. '94, Madison.
Sidney R. Sheldon, U. W. '94, Madison.
Eugene A. Smith, Druggist, Milwaukee.
Alice Stephenson, S. S., U. W.
Charles H. Tenney, Madison.
Frank A. Vaughn, Electrical Engineer, U. W. '95.
A. Cleaver Wilkinson, Chicago.
Caroline M. Young, U. W. '94, Teacher, Chicago.

CLASS OF 1891.

Janette Atwood, M. C., U. W. '95.
Alice Armstrong, Madison.
Wilbur S. Ball, A. C., U. W. '95.
Louise M. Bauman, Madison.
Eleanor Boehmer, Teacher, near Madison.
Jessie Carnon, Sp., U. W.
Lucy Gosgrove, Teacher, Milwaukee.
Harry M. Curtis, Eng., U. W. '95.
Josie Deming, Teacher, near Madison.
Frances E. Doyle, Teacher, near Madison.
Janette H. Doyon, Madison.
Geo. Herbert Greenbank, M. C., U. W. '95.
Anna C. Griffiths, A. C., U. W. '95.
Caroline M. Hauk, Clerk, Madison.
Ida E. Helm (Mrs. Dr. Hart), Madison.
Lucy S. Jones, Minneapolis, Minn.
George A. Kingsley, A. C., U. W. '95.
Helen I. Lancaster (Mrs. John Wright), Milwaukee.
Vroman Mason, A. C., U. W. '95.
Sarah McConnell (Mrs. Ball), Marinette, Wis.
Lydia E. Minch, Sp., U. W. '95.
Robert C. Montgomery, Hahemann College '94, M. D., Madison.
Oscar Felson, Chicago, Ill.
Jennie O'Connell, Book-keeper, Madison.
Harry Potter, Madison.
Catharine Regan, Teacher, Waunakee.
Martha Scheibel, M. C., U. W. '95, Teacher, Edgerton.
Jessie Shepherd, M. C., U. W. '95.
Isabel Smith, Mendota.
Maud C. Smith, Milwaukee.
Halbert Steensland, M. C., U. W. '95.
John J. Suhr, Madison.
Mary J. Thorp, M. C., U. W. '95.
Florence E. Vernon, M. C., U. W. '95.
Fannie Walbridge, Eng., U. W. '95.
Herman Winter, M. C., U. W. '95.

CLASS OF 1892.

David Atwood, M. C., U. W. '96, Univ. of Pennsylvania.
Henrietta Dorothy Billings, Book-keeper, Madison.
Maud Merrill, Bixby, Milwaukee.
Caro Louise Bucey, M. C., U. W. '96, Teacher, Darlington.
Herbert Brigham Copeland, Eng., U. W. '96.
Mary Lois Catlin, M. C., U. W. '96.
Emily H. Detloff, Eng., U. W. '96.
Florence L. Drinker, Portage.
Charlotte Rockway Freeman, M. C., U. W. '96.
Durante Carlyle Gile, A. C., U. W. '96.
Sadie Ellen Gallagher, Eng, U. W. '96.
James A. Higgins, A. C., U. W. '96.
Rolland Frederick Hastrieter, M. C., U. W. '96.
Annie Marie Keeley, (Mrs. James Lawler), Fitchburg.
Charles Kenneth Leith, M. C., U. W. '96.
Michael E. Lynch, Madison.
Rachel Catherine McGovern, St. Paul.
Fred H. Morrell, Madison.
Augusta M. Nichols, Teacher, Shawano.
Annle Marie Pitman, A. C., U. W. '97.
Stella Grace Pierce, Teacher, Mendota.
Louis D. Rowell, Madison, U. W.
John Charles Regan, Chicago.
Walter Hodge Sheldon, A. C., U. W. '96.
Janette Catharine Smith, Eng., U. W. '96.
Carrie F. Smith, M. C., U. W. '96.
Alma R. Sidell, Eng., U. W. '96.
Eugene Sullivan, A. C. Sp., U. W. '96.
Martha Florence Torgerson, Teacher, Sturgeon Bay.
Margaret Urdahl, M. C., U. W. '96.
George P. Walker, U. W., Madison.
Iva Alice Welch, Eng., U. W. '96, Teacher, Washburn.
Bessie Wilson, M. C., U. W. '96.
Addiemay Wootton, M. C., U. W. '96.
Albert O. Wright, Jr., Superior.

CLASS OF 1893.

John Armstrong, C. H., U. W. '97.
Augusta Atwood, Eng., U. W. '97.
Clarissa A. Cook, Madison.
Kate M. Corscot, A. C., U. W. '97.
Joseph M. Cantwell, C. H., U. W. '97.
Clara Comstock, Teacher, near Madison.
Bertrand H. Doyon, C. H., U. W. '97.
Victoria Fish, M. C. Sp., U. W. '97.
Bertha R. Frautschi, Madison.
Bessie Gernon, Madison.
Edith Green (Mrs. Leslie Fletcher), Madison.
Iva Goodwin, Eng., U. W. '97.
Mayme E. Griffiths, Madison.
Annie Habich, Teacher, near McFarland.
Ella Heiliger, Teacher, Belleville.
Isabel M. Holt, Madison.
Benjamin A. Herrick, with Dr. Kollock, Madison.
Carl Jefferson, U. W., Law '96.
Alice Kerwin, Teacher, Madison.
George Meyer, C. H., U. W. '97. *
Minnie Mayers, Madison.
Mary Myrtle Miller, Madison.
Minnie A. Olsen, U. W. '98.
Eliza A. Pollard, U. W. '98.
Martha E. Pouud, M. C., U. W. '97.
Joseph M. Purcell, Clerk, Madison.
James Patterson, G. S. Sp., U. W. '98.
Charlotte E. Pengra, Eng., U. W. '97.
Maud Parkinson, A. C., U. W. '97.
Eva Parkinson, A. C., U. W. '97.
George Riley, U. W. '98.
Frank Riley, Sp., U. W. '98.
Charles Riley, Law, U. W. '95.
Ernest B. Smith, M. C., U. W. '97.
Catherine Steinle, Madison.
Alma Stock, Madison.

*Deceased.

Emma Scermerhorn, Madison.
Nina Adna Swift.*
Amanda Wallace.*
Julia Wilkinson, Clerk, Madison.
David Wright, Jr., G. S. Sp., U. W. '97.

CLASS OF 1894.

Earle Anderson, U. W. '98, Eng. Sp.
May Bennett, U. W. '98, Pharmacy.
Frances Billings, Bookkeeper, Madison.
Helen Copp, U. W. '98, M. C. Sp.
Elmore Elver, U. W. '98, C. H.
Jesse Edgren, U. W. '96, Law.
Gertina Erickson, Teacher, S. D.
Mary Freeman, U. W. '98, M. C.
Florence Gage, U. W. '98, Pharmacy.
John Gregg, U. W. '98, M. C.
Grace Greenbank, U. W. '98, M. C.
Arlene Grover, U. W. '98, M. C.
Maud Gilbert, Madison.
Mabel Lamberson (Mrs. Dr. Sippy), Denver, Colo.
Clarice Lytle, N. W. Univ. '98, M. C.
Max Mason, U. W. '98, C. H.
Jessie Monteith, U. W. '98, M. C. Sp.
Anton Malec, U. W. '98, M. E.
Lillie Moesner, U. W. '98, Eng.
William Munsell, U. W. '98, C. H.
Stuart Sheldon, U. W. '98, G. S.
August Sauthoff, U. W. '98, G. S.
Harry Sheasby, Bookkeeper, Madison.
Florence Slightam, Madison.
Mae Smith, U. W. '98, M. C.
Harriet Stephenson, U. W. '98, M. C.
Edmund Suhr, U. W. '98, C. H.
Louise Swenson, Madison.
Lucy Tompkins, U. W. '98, M. C.
Lena Troan, Madison.
Grace Whare, Teacher, Madison.

* Deceased.

May Whare, Teacher, Madison.
Augusta Wood, U. W. '98, M. C. Sp.
John Young, U. W. '98, M. C.

CLASS OF 1895.

Lillian Boehmer, Madison.
Betrha Louise Brown, Madison.
Bertha Josephine Butler.*
Ralph Milford Benson, Clerk, Madison.
Emma Maria Bibbs, Madison.
Raymond Eugene Brown, U. W. '99.
Clay Sumner Berryman, U. W. Sp. '99.
Lillie Case, A. C., U. W. '99.
Catherine Isabella Cantwell, U. W., M. C., '99.
Matilda Clark, U. W. '99, M. C.
William Sylvester Darling, G. S., U. W. '99.
Albert Ralph Denu, U. W., G. S., '99.
Helen Ada Fowler, U. W. '99, M. C.
William Muzzy Fowler, Madison.
Winifred Griffiths, Madison.
Sabil Adelaide Gale, Typewriter, Madison.
Edith Van Slyke Gibson, U. W. '99, M. C.
Maurice Ingolf Johnson, U. W. '99, M. C.
Frank Xavier Koltes, U. W. School of Pharmacy.
Florence Josephine Ketchum, Madison.
Minnie Magdalene Lueders, U. W. '99, M. C. Sp.
George Nels Lewis, Madison.
Florence Mina Lang, Madison.
Clara Helen Link, U. W. '99, Eng.
Josie Winifred Martin, Madison.
Maria Malec, U. W. '99, Eng.
Nettie Irene McCoy, U. W. '99, Eng.
Thomas William Mitchell, U. W. '99, Eng.
Edith Nelson, U. W. '99, A. C.
Minnie Irene Nichols, U. W. '99, M. C.
William O'Dwyer, Dane.
Mabel Agnes Pengra, U. W. '99, A. C.
William Fred Paunack, Madison.

* Deceased.

Lily Agnes Regan, Madison.
Annie Howe Regan, Madison.
Alma Grace Rogers, U. W. '99, M. C. Sp.
Harry Gray Smith, Madison.
Ralph William Stewart, U. W. '99, C. E.
De Ette Stemple, Teacher, Springfield.
Fannie Straslipka, Madison.
Clarence Howard Slightam, Madison.
Thomas William Tormey, U. W. '99, M. C.
Stephen William Van Wie, Madison.
Carrie Walbridge.
Paul Sherman Warner, U. W. 1900, G. S.
Florence Maurine Warner, U. W. 1900, G. S.
Fannie Warner, U. W. 1900, M. C.
Minnie Comstock Westover, U. W. '99, G. S.
Allin Orvis White, U. W. '99, M. C.
Olive Leona Wise, Madison.
George Bartholomew Whare, Madison.

CLASS OF 1896.

Richard Henry Baus, U. W. 1900, G. S.
Lisle Victor Benson, Madison.
Edward Albert Cook, U. W. 1900, G. S.
Nathan Curtis, U. W. '99, Eng. Sp.
John William Dreyer, U. W. 1900, M. C.
Henry Clay Duke, U. W. 1900, M. C.
Frank Edward Darling, Jr., U. W. 1900, G. S.
Jessie Esther Davis, U. W. 1900, G. S.
Daisy Dye, U. W. 1900, G. S.
Emma Josephine Erickson, Racine.
Caroline Whellam Evans, Madison.
Millie Gath, U. W. 1900, M. C.
Morton Kay Green, Middleton.
John Goodwin, U. W. 1900, G. S.
Violet Grey, Windsor.
Claudia Hall, U. W. 1900, M. C.
Jennie Housel, Madison.
Harry Hansen, Madison.
John Pettit Kelley, U. W. 1900, M. C.
Mabel King, Madison.

Minnie Karstens, U. W. 1900, G. S.
Ena Kney, U. W. 1900, Eng.
Ward Lamberson, U. W. 1900, M. C.
John Thomas Stewart Lyle, U. W. 1900, M. C.
Ellen Ware Lamb, U. W. 1900, G. S.
Lillian Fidelia McCarthy, Madison.
Jean Monteith, U. W. 1900, M. C.
Walter Bernard Minch, U. W. 1900, G. S.
Jeannette Maltby, Teacher.
Norman Nelson, U. W. 1900, M. C.
Frank Nichols, Madison.
Edward Earl Parkinson, Madison.
Lee Allen Parkinson, U. W. 1900, Eng.
Roy Erastus Pierce, U. W. 1900, Eng.
Miriam Kieth Reid, U. W. 1900, M. C.
George Edward Schilling, U. W. '99, M. C.
Marie Antoinette Schneider, Madison.
Florence Sturm, Madison.
Goldwin Howard Smith, U. W. 1900, Eng.
Eunice Wallace Welch, U. W. 1900, M. C.
Addie Wilke, Mil. Normal 1900.
Paul Gernhard Winter, U. W. 1900, G. S.
Thomas Wellitt, U. W. 1900, G. S.