EIGHTH GRADE - MR.GILLET

Jan.8,1909.

MATHEMATICS: Although this class has a better grasp of Mathematics than any Eighth Grade I have taught previously, I find it weak in the ability to see the conditions of problems. For the next several weeks I shall give most of the Mathematics time to teaching the children to formulate the equasions involved in the solution of simple algebraic problems. I am taking the problems from various text books of Eighth Grade Algebra. Already I can see that the children are beginning to realize in the equasion they have atool which will enable them to work mathematical problems which heretofore they have not been able to attack with success.

GRAMMAR: Scott & Buck's English Grammar, Page 7. Declension of nouns and pronouns. Mainly a consideration of methods of forming the plural.

GEOGRAPHY: A study of earthquakes. In the first lesson I talked to the class about earthquakes in general and especially about the great earthquake in Italy. I raised several questions as to the cause of earthquakes and assigned references. Next day the class had a great amount of material to offer, some of which had been gleaned from the references given, but a good deal of which the children had got from their parents and from such books as they had at home. This discussion was continued the third day and on the fourth the class wrote short papers giving a capitulation of the work of the week.

EIGHTH GRADE--MR.GILLET

Jan.15,1909.

MATHEMATICS:

Continued work with problems requiring statement of equasions. Classis improving every week and becoming more confident of its ability. Home work was given every evening, and with one or two exceptions each time each child in the class did the work conscientiously and with an increasing degree of accuracy.

GRAMMAR:

Chapter 7 in Scott & Buck's English Grammar. Review of singular and plural with rules for forming plurals of certain classes of words. Considerable written practice.

Masculine and feminine gender; corresponding forms; considerable written work for practice.

GEOGRAPHY:

Continued study of South America, making special reference to the agricultural regions with the progress of each. The great possibilities in the agricultural regions yet to be opened.

EIGHTH GRADE MR. GILLET

Jan.28, 1909.

MATHEMATICS:

Continued work with problems requiring formulation of equasions for solution. Formulation of ways by which equasions may be manipulated. For example, the equality of two members of an equasion is not affected by adding the same amount to both members. This is the first time the principles have been formulated, although they have been used for several weeks. Nothing will be said this year about transposition.

Continued home work uniformly well done.

GRAMMAR:

Written review of corresponding masculine and feminine forms of certain nouns and pronouns. Common and neuter gender. Person in pronouns.

One lesson on forms used in business correspondence.

GEOGRAPHY:

Continued study of South America. Special emphasis upon the commerce between the various states of South America and the United States. The effect the opening of the Panama Canal will have in stimulating this commerce. Reference reading:

Redway's and Adams' Commercial Geographies,

sets of which are in the school library.

EIGHTH GRADE - MR. GILLET

Jan.29, 1909.

MATHEMATICS:

Beginning of work in multiplication in Algebra. The purpose is to bring to consciousness the process of multiplying in arithmetic. The square of the binomial. Construction of a square with side a b and computing its area as a ab ab b.

GRAMMAR:

Review of lesson on business correspondence. Reading of letters written by the class and mistakes noted. Letters written for correction.

The four uses of the nominative case.
The four uses of the objective case.
The possessive case, and how it is indicated.
Chapter 7, Scott & Buck's English Grammar.

GEOGRAPHY:

This week each child has reported on some phase of the Geography of South America in which he is especially interested. The material has been collected from various books in our own library and from magazines and books consulted at home. The reports are being given orally and indicate a pretty good grasp of the Geography of the continent which they have been studying.

EIGHTH GRADE - MR. GILLETT

Feb. 5, 1909.

MATHEMATICS:

The only new principle developed was the method of finding the product of the sum and difference of two quantities. I had them work a large number of problems of this kind until they recognized: first, just how the problems were similar, and, second, the similarity in the form of the products. We have not as yet formulated the rules governing these processes, but there is no reason why these formulations should not be made in very simple language after we have had a little more practice. The application of the arithmetic is in finding the product of such numbers as 67 and 73, by considering them as 70 minus 3 and 70 plus 3. It remains to be seen how much practical value this arithmetical application has for the children, but its value in opening up new number relations and broadening the mathematical vision is unquestioned.

There has been continued practice in solving problems by formula and using equations, and in finding the values of formulae when the terms had specific values assigned.

ENGLISH GRAMMAR:

We have spent all the Grammar time this week upon practice in the four uses of the nominative case and the four uses of the objective case. I chose from Buehler's practice exercises in English about 100 sentences in which there were blanks to be filled with personal pronouns inthe nominative or objective case, as the structure of the sentences demanded. The children had to analyze each sentence carefully to find the case in which the pronoun would have to be before they could determine the proper form to use. In the main their having been taught the use of good language at home made it easy to select the right form without analysis, but so many mistakes were made by the best speakers, that everybody saw the need of analysis, and the use of grammatical principles. I consider this very valuable work, and intend to devote another week to it later in the year.

GEOGRAPHY:

According to the present division of teaching, Miss Strate, my regular paid assistant teaches Geography to my class, while I teach Miss Stilwell's class. Miss Stilwell was absent the first part of the week on account of illness, and her class program had to be changed in such a way as to make it impossible to teach my regular Geography lessons. This class has just received twenty new members promoted from the Seventh Grade and I expect to have a little trouble in organizing the old children and the newcomers in a unified class for the work in Geography.

EIGHTH GRADE - MR. GILLETT

Feb.12, 1909.

MATHEMATICS:

This has been a short week for Mathematics, as the Lincoln exercises on Thursday came at the Mathematics time and Friday was a holiday. The two periods were given to further practice in evaluating various formulae by assigning specific values to the terms. The particular facts brought more fully to the consciousness are:

1st, a formula is a general statement which applies to many specific cases.

2nd, As a fraction is raised to a higher power, it becomes smaller.

3rd, that $\frac{gt^2}{2}$ means the product of $g \times t^2$ divided by two.

ENGLISH GRAMMAR:

Our lessons this week have been on the first few paragraphs of Chapter 7 of Scott and Buck's English Grammar. Little time was necessary for the discussion of the inflection of verbs as to person and number. Most of the time was used in developing the idea of tense and in the use in sentences of verbs in the six tenses. We are now ready to conjugate verbs in the indicative mood and it will be necessary to learn the principle parts of irregular verbs.

We have had one written review lesson on Chapter 7.

GEOGRAPHY:

(Miss Stilwell's Class).

The course in Geography for the second semester includes a study of the great natural resources of this country, which in their exploitation and use in the arts make possible the industrial activities of the country. The first of these resources to be taken up is coal, and a study of its origin and distribution has occupied the Geography periods this week. In this work the trouble will be to provide for the children the materials for study. Our library is provided with few books treating on such subjects and the children's geographies are of scarcely any help.

EIGHTH GRADE - MR. GILLET

Feb.19, 1909.

MATHEMATICS:

We have dropped our work with the equation as such, for a while, and we shall now spend some time upon several of the simpler principles of geometry. This week we have given the time to a consideration of the principle that the area of a square erected on the hypotenuse of a right triangle is equal to the sum of the areas of the squares erected on the other two sides. After I had proved the principle by actually drawing the right triangle with the squares erected on the sides and finding the areas, I had the class prove the principle for themselves by using right triangles of various sizes and proportions. We were then ready for a further statement which is really the converse of the first, that when a square erected on one side of the triangle is equal to the sum of the squares erected on the other two sides, the triangle is a right triangle. We then had considerable practice in finding whether or not triangles with certain measurements were right triangles. This practice was valuable in fixing the principle given above, as well as in giving a clearer idea of the meaning of the term "the square of a number".

We were then ready to find any side of a right triangle when the other two sides were given. The last lesson I gave them without much explanation the method of finding the square root of a number. It is not my purpose to go very far in justifying the method, for in my experience it has never resulted in benefit to the pupil. The process is one to be learned and to be used, but not necessarily to be understood until later.

GRAMMAR:

We are still working on Chapter 8 in the text book. The grammar periods this week have been spent in learning the principal parts of many irregular verbs and using these principal parts in conjugating and in giving synopses.

GEOGRAPHY: (Miss Stilwell's Class)

In considering further the topic "coal" we have taken up the location and extent of the great coal fields of United States and the effect of the coal in stimulating industries within easy reach of the coal fields. Chicago is an excellent example of a city absolutely dependent upon a near supply of coal. I have not been able to find very many books to refer the children to, and as a result most of the lessons have been developed by discussion in class. The last lesson was written and involved a review of the more important facts brought out.

SCIENCE:

We have begun the study by experiment of some of the processes used in our industries. Our first experiment was the classic one of making illuminating gas from hard coal, soft coal, wood, or paper. The children filled the bowls of pipes with the gas-producing substance and sealed them with plaster of Paris. At the next lesson the pipes were ready to be heated. When the

heat from a Bunsen burner was applied, the gas was driven off through the stem of the pipe and could be lighted. When the gas ceased to come, the children examined the substance left in the bowls of the pipes and found it to be coke or charcoal, a substance which would not burn easily. The various phenomena observed in this experiment gave rise to a good many questions on the part of both girls and boys, and proved a stimulus which resulted in the children's answering some of their own questions by further experimentation at home. The children's records were unusually good, being simple and natural, and showed evidence of careful thought and reasoning.

EIGHTH GRADE -- MR. GILLET.

Feb. 26, 1909.

MATHEMATICS:

We have continued the work of right triangles, giving most of the time to finding one side of the triangle when the other two sides were known. This practice in the operation of finding the square-root has made the process almost automatic. In some of the problems the class found it impossible to calculate the length of a side exactly, as the square-root could not be found exactly. This is one of their first experiences where the results are only approximately correct, and we spent some little time in discussing the closeness of approximation needed in various kinds of measurements. For example, in making an estimate of the cost of a sidewalk diagonally across a rectangular city park, it would not be necessary to calculate beyond the whole number of feet, but in making the parts of a steel bridge it would be necessary to calculate to the tenth or even the hundredth of an inch. Again, where the number to be approximated is to be multiplied by a large number, the approximation necessarily must be very close.

In the last lesson I gave them the problem of finding the altitude and then the area of an equilateral triangle. The problem was given for home work, without any explanation whatever, and I was pleased with the result, for almost everybody in the class had solved it correctly.

GRAMMAR:

We are continuing the study of the conjugation of verbs, using the same method as represented last week.

SCIENCE:

This week we began our series of experiments with oxygen. I had to spend the first hour in showing them a method of making the gas, for I was afraid that their undirected experimentation toward an end might result in some accident. I was especially afraid that in the process of collecting the gas over water, the heat might be removed for an instant and the resulting contraction might allow some water to flow into the hot test tube, when of course there would be a small explosion. During the second lesson each child worked for himself, collecting and making such apparatus as was necessary, making the gas, testing it, and some few have progressed far enough to collect the oxygen.

EIGHTH GRADE -- MR. GILLET.

March 5, 1909.

MATHEMATICS:

Continuing the work started last week which involved finding the altitude of an equilateral triangle, I set the problem of finding the area of a regular hexagon, given the length of one side, or the radius of the circumscribing circle. Without further help than showing the class how to inscribe a regular hexagon in a circle, the children worked the problem easily and accurately. We spent, however, two more lessons on the same kind of problem, using hexagons of various sizes. Some of the problems involved considerable analysis.

ENGLISH GRAMMAR:

In our grammar lessons this week we have learned the meaning of active and passive voice, of the indicative and imperative modes, and of the infinitive and participles. To get the meaning of voice always seems difficult, but I feel that the children have now fixed it firmly in mind.

GEOGRAPHY: (Miss Stilwell's Class).

We are still working on the geography of the iron and steel industry of the United States. I am finding McMurry's account of it in his "Type Studies of American Geography" an excellent one for class use. Our object in this work is to gather together and unify the knowledge of the geographical conditions learned in the lower grades. The children have a great fund of information, and the work of organizing it is proving valuable.

SCIENCE:

This week each child made and collected quantities of oxygen which he used in several kinds of experimentation, mainly to find the properties of the gas. I am very much pleased to report that my fears of an accident were not realized, and in not a single case did a child disregard the directions [illegible] tested for himself the effects of oxygen upon a glowing splinter, upon a glowing piece of charcoal, upon hot coke which they were unable to ignite without the use of pure oxygen, and upon fine iron wire tipped with sulphur which was ignited. I have not referred the children to any text books of chemistry, but a number have gone to them for reference, as well as to their parents and older brothers and sisters in the high school. This work is proving valuable in several ways, but especially in the training it gives in the power to manipulate materials toward an end and in the knowledge of the properties of the substance with which they are experimenting.

EIGHTH GRADE --- MR. GILLET.

March 12, 1909.

MATHEMATICS:

Using as a basis the knowledge of principles governing the calculation of the area of a regular hexagon, we worked out this week the process of finding the area of a circle. The class caught the process much sooner than any previous class with which I have had experience. As an experiment I have given for home work this problem:

(1) If the area of a circle is equal to the product of the circumference and one-half the radius, and (2) if the circumference is equal to π times the diameter, and (3) if the diameter is equal to twice the radius: prove, that the area of a circle is equal to π x the square of the radius.

The class is to get no help and I am awaiting with interest the results of their work.

In addition to the work on circles this week we have had two written lessons for the purpose of reviewing the work of the last three months. These lessons were of some value in showing individuals the particular lines of work in which they were weak, and in the second lesson which was very similar to the first, the results were much more satisfactory.

ENGLISH GRAMMAR:

We have spent our grammar time this week in reviewing Chapter 8 by giving the voice, mode, tense, person and number of the verbs in the set of sentences at the end of the chapter.

GEOGRAPHY:(Miss Stilwell's Class)

We are still continuing the study of iron and steel industry, following the same method as reported last week.

SCIENCE:

We finished this week our work on oxygen. The first hour was used for a general discussion of the properties of oxygen, paying special attention to its power of oxidation, and to the physiological aspects involved. The classes spent the second hour in writing a record of their experiments. The records are in my opinion very creditable.

B 2 3 4

EIGHTH GRADE -- MR. GILLET.

April 2, 1909.

MATHEMATICS:

Before I left for the East on March 17th, I gave to the class a set of twenty problems which were to be worked and presented to the teacher in charge during my absence. Through a misunderstanding, the teacher took up other work. I thought it best, therefore, to take up this week this set of problems and as the children have found them rather difficult, we have spent the whole week explaining them and fixing in mind the principles involved. The problems centered about these formulae:

$$D = 2R$$
$$C = 2\pi R$$
$$A = C \times 1/2\ R$$
$$A = \pi R^2$$

where D is the diameter of the circle, R the radius, C the circumference and A the area. The children were asked to find the area, given the radius; to find the radius, given the area; to find the area given the circumference; and to find the circumference, given the area.

GRAMMAR:

This week we took up and finished Chapter 9 of our text. This chapter treats of the comparison of adjectives and adverbs.

GEOGRAPHY:

This week in our three geography lessons we have reviewed the iron and steel industry which formed the main topic of study for the latter part of the winter quarter.

EIGHTH GRADE -- MR. GILLET.

April 9, 1909.

MATHEMATICS:

It is my plan to spend most of the rest of the mathematics time this year on a thorough review of the fundamental processes and their applications as studied in the fifth, sixth and seventh grades. The work this week has been taken from Myers & Brooks' Grammar School Arithmetic, the text which these children used last year. We are starting with the addition, subtraction, multiplication and division of fractions and I am paying special attention to the formulation of the problem before it is worked. For example, the sum of $2/3 + 1/4 = \frac{4 \times 2 + 3 \times 1}{4 \times 3} = \frac{11}{12}$

GRAMMAR:

Continuing the study of adjectives. I gave the class a great many pairs of adjectives whose meanings are often confused. The class was to look up the meanings and use the words correctly in sentences. I feel that this work has been of great value and it is my purpose to give considerably more of it now that we have gone through all the chapters of our regular text.

GEOGRAPHY:

This week we took up as our new work a study of cotton. The method used will be very much like that used in considering the iron and steel industry studied last quarter.

EIGHTH GRADE -- MR. GILLET.

April 16, 1909.

GRAMMAR:

Using the sentences at the end of each chapter, I have been reviewing the grammatical principles learned during the year. Each child is reciting on three or four sentences in each chapter analyzing as carefully as he can, and no child is considered to have finished the chapter until his recitation is almost perfect. A good many of the recitations have been made after school for then I can give indivisuals much more help than in class.

ARITHMETIC:

I am continuing the review of fractions, using the problems in Myers & Brooks' Arithmetic. The method has been to sent groups of six or eight children to the blackboard, and have them work simple problems rapidly, while the others work the same problems at their seats. No group works longer than five or six minutes at the board, and so I was able to sent almost all the children to the board every day. In this way I was able to see just what each child was weak in and could assign home work accordingly.

GEOGRAPHY:

We finished this week our study of the cotton industry of the United States. Most of our time has been given to the consideration of the manufacture of cotton and the sale of the finished product. In this work I am paying special attention to the clear, accurate and logical statements both oral and written.

EIGHTH GRADE -- MR. GILLET.

April 23,1909.

GRAMMAR:

In addition to the continuation of the review described last week, I have given one lesson on the uses of "shall" and "will", "should" and "would". I have required each child to recite perfectly on the first four chapters in the grammar before Friday evening, April 30th. Most of the recitations are being made after school.

ARITHMETIC:

We are still working on fractions. In addition, we took up this week some of the principles of proportion. This is the first time the subject has been presented to this class. I find that since the beginning of the year there has been a decided increase in the ability of the class to grasp a new process, and to use its applications.

GEOGRAPHY:

Our study this week has been on the geography of Chicago, taking this city as any typical large city that owes its growth and its importance to its geographical location.

EIGHTH GRADE -- MR. GILLET.

April 30, 1909.

GRAMMAR:

I have continued with the plan of hearing the children recite upon each chapter after school. This plan gives me a chance to learn just what each child is behind in. On the average I hear recitations from about fifteen children each afternoon. Some of them stay as late as four o'clock.

MATHEMATICS:

In addition to the regular class work and the problems assigned for home work we have had this week two written lessons. I find that very often our children are over-confident and feel that they have learned that which they have only caught a glimpse of. I feel also that they are somewhat lacking in independence. They have been xx accustomed so long to working as a social group and to getting help from their parents that they find it hard to work by themselves. While our frequent written lessons this year have had a disquieting influence upon the children and the parents alike, the results have been good. The children have been forced to see that they are expected not only to learn the principles which are explained in class, but are expected to remember them. I have not made any record of the results of these written lessons, because I did not want to make marks a motive for good work, but the children have compared their results and the boy who is below the standard realized it and feels that extra effort will be needed to work up.

GEOGRAPHY: (Miss Stilwell's class)

As the last topic of the year, we are taking up Chicago and its geographical significance. The working out of this topic includes the study of the location of Chicago and the effects of the location on the city's growth; some little history of the growth of Chicago, with special attention to the geographical factors involved; the great "hinterland" and what it contributes to Chicago in the way of raw material; how Chicago is manufacturing this raw material into higher-priced products, and how Chicago levies a tax thereby. I am surprised to find how much the children know about the manufactures of their city. I think they have gained their knowledge in two ways: from their business men fathers, and from many excursions which we as a school have conducted to the manufacturing plants in and near Chicago.

EIGHTH GRADE -- MR. GILLET.

May 7, 1909.

GRAMMAR:

The plan of hearing children recite after school is still being followed and will be for several more weeks. It is working well. Each child feels that he must know his lesson perfectly before he attempts to recite upon it. He may get all the help he wishes before the time of the recitation, but after he begins, a failure means that he must try again the next day.

In addition to the regular work in English Grammar, I use a part of the English time for a review of the spelling words to be used in the spelling match between the seventh and eighth grades in about three weeks.

MATHEMATICS:

We have continued our review of fractions, paying special attention to proportion and its applications.

GEOGRAPHY:

We are continuing the work as outlined last week. After another week on this topic we shall drop geography altogether for the rest of the year, and spend the time on a review of mathematics.

EIGHTH GRADE --- MR. GILLET.

May 14, 1909.

GRAMMAR:

With the help of the fathers and mothers I think we shall accomplish this year the work which we have planned for the eighth grade. I have always felt tht it was unfortunate to postpone the study of grammar until the eighth grade. One year is too short a time to build up a comprehension of the intricate structure of the English language. Our recitations after school have been the greatest help in giving me a knowledge of the children's misunderstandings and failures to comprehend. It makes me all the more sure that next year we ought to plan to take two years for what we are now trying to do in one.

MATHEMATICS:

We are taking up this week several construction problems such as: bisecting a straight line, bisecting an angle, proving by construction that the perpendicular bisectors of the sides of a triangle meet in a common point, proving by construction that the bisectors of the angles of a triangle meet in a common point, dividing a straight line into three equal parts, drawing a line parallel to another line, and drawing a line through a point parallel to another line.

GEOGRAPHY:

We are finishing the geography of the Chicago area, as reported for the last several weeks.

EIGHTH GRADE --- MR. GILLET.

May 28, 1909.

GRAMMAR:

Continuation of the recitations after school. The regular grammar periods are still being used for work on "Sohrab and Rustum" and "Julius Caesar".

MATHEMATICS:

This week the work has been a review of our work with triangles, parallelograms and circles. The review has been valuable in that I have discovered a few instances of where the children have failed to become really conscious of certain relations.

GEOGRAPHY (MISS STILWELL'S CLASS):

Continuation of work on triangles.

EIGHTH GRADE -- MR. GILLET.

May 21, 1909.

GRAMMAR:

Continuation of review lessons after school. The regular grammar periods are being given to Miss Stilwell and Miss Fleming who are teaching "Sohram and Rustum" and preparing part of the class for a presentation of one scene from Julius Caesar.

MATHEMATICS:

We are still working on a review of the fundamental operations as applied to fractions.

GEOGRAPHY (MISS STILWELL'S CLASS):

Our geography time is now being given to mathematics. I am working on triangles.

EIGHTH GRADE -- MR. GILLET.

June 4, 1909.

GRAMMAR:

Most of the class have finished their recitations on the nine chapters in the Grammar. During the regular recitation periods we have been reviewing our spelling words in preparation for the "spell-down" between the seventh and eighth grades which is to come the last week of the quarter.

In preparing for the recitations in grammar I have been encouraging the children to recite first to such of their classmates as have finished the grammar work of the year. The plan has succeeded. It helps the child who is conducting the recitation fully as much as the child who is reciting. These recitations conducted by pupils have not been in the presence of the class, but always in the corridor or in a room where no class is reciting.

MATHEMATICS:

Our review this week has been on cubes, right prisms and cylinders.

GEOGRAPHY (MISS STILWELL'S CLASS):

This week we have established the principle that the sum of the squares of the legs of a right triangle is equal to the square of the hypotenuse. In connection with this I am teaching the process of extracting the square root.

EIGHTH GRADE -- MR. GILLET.

June 11, 1909.

I have made little effort this week to follow any consecutive lines of work, because so much time has been taken for the preparation of our graduation exercises. In mathematics we attempted nothing new, but did a good deal of review work at the blackboard. On Tuesday we had our spelling match between the 7th and 8th grades. Although the list of words was one prepared by the seventh grade, the eighth grade spelled the seventh grade down, and they were very proud of their victory. I think it was due to the fact that they have given considerable hard study to the words in the last few weeks. In Miss Stilwell's division I gave three lessons involving problems in mensuration, all leading toward finding the area of a regular hexagon. This class has done especially well in learning the process of square root.

On the whole I feel very much pleased with this year's work in the eighth grade. The class is the best I have ever had in that it was most unified and was best prepared for the work of the grade. The class as a whole was promoted to the high school, and will I hope do credit to us next year.