AN EXPERIMENT IN THE SEVENTH GRADE OF THE TEACHERS COLLEGE ELEMENTARY SCHOOL, UNIVERSITY OF MISSOURI, IN THE ATTEMPT TO FIND A PRINCIPLE WHICH WOULD REMEDY SOME OF THE DEFECTS OF THE PRESENT ELEMENTARY SCHOOL CURRICULUM.

by

Ernest Horn.

Principal of Teachers College Elementary School
University of Missouri.

A THESIS

Presented in Partial Fulfillment

of the Requirements for the Degree of Master

of Arts

Teachers College, University of Missouri.

June, 1908.

PREFACE.

This thesie describes an attempt tp remedy some of the defects of the modern elementary curriculum. That there were such defects has been felt by the author since he first taught in a rural school. As a result of courses in Education in the University of Missouri, particularly of the courses in Educational Psychology, and in Elementary Education, under Dr. J. L. Meriam; Educational Psychology under Dr. A. Ross Hill and in Principles of Education and Philosophy of Education under Dr. Jesse Coursault; the nature and extent of these defects became more apparent.

Through the inspiration of Dr. J. L. Meriam, the author began work upon the alleviation of these defects, as principal of the Teachers College Elementary School. After experimenting one year with the fourth, fifth, sixth and seventh grades, an hypothesis for a course of study in the seventh grade was formulated and tested in that grade of the Teachers College Elementary School. This experiment, with its conclusions, forms the subject matter for the following thesis."

The author is indebted to Dr. W. W. Charters and Dr. Jesse Coursault, for many helpful suggestions in modifying the first draft of the thesis, and to Dr. J. L. Meriam through whose kindness and encouragement the experiment was made possible.

TABLE OF CONTENTS.

CHAPTER I.

The Course of Study for the Eighth Grade in Representative American Cities.

The basis for the study of the modern curriculum is Payne's "Public Elementary School Curricula",(1) supplemented in places by more detailed data obtained from recent courses of studies of some of the larger cities in the United States, and by personal letters from school principals in those cities. Except in cases where the data were not sufficiently detailed there has been no attempt to verify Payne's statistics, nor does this paper pretend to embody a sufficiently great number of schools to make this paper strictly a scientific one. The author believes, however, that every reader's experience will force him to admit that the schools chosen are but common types of conditions existing throughout the United States. The investigation has extended over some twenty-five systems, and so far as the examination has gone, the author has found so little variation even where geographical separation and changed conditions would lead one to expect considerable difference, that, with the exception of minor changes, the curriculum of a single city might well be chosen and accepted as a fair sample of all the rest. The author has, therefore, not hesitated when brevity demanded, to cite examples ~~deem~~ from a single city alone taking care only to eliminate mere temporary fads by comparisons with the other curricula.

The table below is compiled from Payne's(2) tables to which is added the St. Louis Curriculum.(3)

(1) Payne. Public Elementary School Curricula. pp.19-62.
(2) " " " " " pp.26-56.
(3) Outline of Course of Study for St.Louis (1905). This had not been revised at this date. (1908).

	New York	Boston	Chicago	New Orleans	San Francisco	Kansas City, Kansas	Jersey City	Columbus, Georgia.	Louisville	Cleveland	St. Louis
1. Opening Exercises	75	30	25		50		50	75	25	25	50
2. Reading		200		200	135	120	270	40	150	210	90
3. Writing		30	60				85	40			60
4. Spelling		30	60	90	50	50		60	75	45	30
5. Grammar		90	160	350			260	240	150	270	120
6. Composition Language	320	130	175	30	200	150		60	135		
7. Algebra Arithmetic	200	210	300	250	225	150	270	275	240	300	150
8. Geography	120	60		110	135	60	130	200	185		120
9. Civics History	120	180	200	140	200	30 120	137	250	180	175	150
10. Nature Study Science	80	60	90	60	50	30	52		75	80	30
11. Physiology		30		30			30	100		40	
12. Physical Training	90	80	50	50	50		50	150		40	50
13. Drawing	80	90	90	55	60	90	90	45	90	85	90
14. Music	60	60	75	60	60	75	45	30	75	75	50
15. Manual Training Domestic Science	80	120	90		60			90	-		-
16. Business							20			50	
17. Foreign Lnaguages	200		300								
Total No.Subjects	11	15	13	12	12	10	13	14	12	12	13
Real No.Subjects	17	17						15			

As may be seen from the table, the studies are grouped somewhat as in the case of history and civics. Even as grouped, however, only one city, Kansas City, Kansas, has as few as ten subjects, and seven cities have thirteen or more. This number, moreover, is really smaller than the number actually taught as separate subjects. In New York, for example, language includes as a group, reading, spelling, grammar, and composition (which includes rhetoric), each of which has its own special subject matter and each of which receives special treatment.(1) In a similar way, algebra is usually joined with arithmetic; and civics, while it has an entirely separate list of topics, is grouped with history. Instead of eleven subjects, then, there are seventeen. All other cities that have been examined closely have above fifteen subjects.

No attempt is made in these schools, of course, to teach every subject every day. Subjects shown in the table to have a small weekly time allotment are given but one or two recitations periods a week. The number of recitations per day can be approximately computed. New York(2) has twenty-nine forty minute periods a week exclusive of the time devoted to opening exercises, physical training, hygiene and music. If one might apportion these studies upon the basis of the allotments of the same subjects in other schools, there could hardly be less than seven recitations each day. In St.Louis where the number of recitations in each subject are stated in the printed course of study there are thirty-three recitations a week not including opening exercises. Including

---

(1) New York Course of Study 1907. pp. 34-38.
(2) " " " " " " pp. 2.

these, there would be seven recitations two days in the week and eight the other three days.(1) This gives the division of the child's energies so far as subjects are concerned.

To get the total division it is necessary to count each unrelated topic within each subject, since the division of his energies will be just as great as the total number of distinct topics in all subjects. I shall accordingly analyze the content of each subject, taking up the subjects as they appear in the table on page 2.

As was noted on page 1, the schools of the table present in general little variation. Unless, as will be noted below in the discussion of science, there were more than small diversions, I have taken the liberty to select first one and then another city curriculum to illustrate the point under discussion, realizing that in describing a single example there is danger of giving an unfair grouping of studies, considerable care has been taken to make such selections truly representative.

1. Opening Exercises:

This consists of a variety of exercises such as singing, repeating memory gems, discussion of current events, and moral teachings. The number of different ideas taken up, and their dissipating effect upon the child's attention, depend upon the teacher in charge, and upon the relative emphasis given to each of the above named topics.

2. Reading:

The heaviness of the course in reading depends upon; first, its subject matter, and second, the manner in which it is taught.

---

(1) St. Louis. Outline of the course of study. 1905. p. 4

Considerable difficulty was found in getting detailed information upon both elements in the case of even a single city. It is taught as a separate study in ten of the eleven cities in the table. As a representative of the subject matter St. Louis was selected, which finishes Baldwin's Reader, eighth year. St. Louis was selected upon the hypothesis that this text being widely used represents a fairly typical amount and quality of subject matter. The course as represented in this book covers 233 pages of reading matter divided among forty-three selections, from thirty-nine different authors, and covering every type of literary expression.

The method of teaching as far as investigated, consists in cultivating oral expression, picking out figures of speech, studying literary style, and memorizing certain choice passages. All schools expect considerable home reading. The exact amount is largely determined by the principal of each school.

3. Writing:

Writing consists of copy exercises, supplemented in some cases, as at Columbus, Georgia,[1] by practice in business forms. I have been unable to tell the exact nature of these forms, except that they are business forms, contracts, letter writing, &c.

4. Spelling:

Spelling is taught as a separate subject in eight of the eleven schools of the table. In a ninth school it is included under language, and the time is not specified. In the eight schools it receives an average weekly time allotment of fifty-four minutes (simple average). The three of these schools which alone have been examined on the point, use texts or word lists

---

(1) Annual Report of Public Schools, Columbus, Georgia, 1907, p.76.

Attention is given to two things; to orthography,and to subject matter. The latter part of the work is becoming much heavier.from the custom of requiring the definition of words, and from the introduction of what might be called content words, grouped as sciences, occupations, &c.

5. Grammar:

Grammar teaching consists of the topics ordinarily found in a textbook.[1] Below is given the course outlined for Boston.

I. The sentence.

1. Kinds according to use, according to form.

2. Modifiers.

a. Adjectives and adverbs.

b. Adjective and adverb phrases.

c. Adjective and adverb clauses.

3. Noun clauses.

II. Parts of speech reviewed.

1. Special study of the verb; mode, tense, voice, agreement.

2. Infinitives.

3. Participles.

III. Parsing to emphasize the word relations in sentences.

IV. Analysis of easy, simple, compound and complex sentences.

V. Principles of syntax.

NOTE: There seems to be a tendency to make close application of correct forms of grammar, to written and oral composition.

6. Composition and Language:

The effort required for composition depends upon: first, how much attention is given to rhetoric; and second, the content of

---

(1) Boston. Provisional Course of Study. 1907. p. 51.

the theme. As to the first point, the courses usually cover in an elementary manner the subject matter of the ordinary rhetoric, embodying the forms of discourse and the qualities of style. The content of the theme seems to represent an attempt to widen the child's experience by choosing for subjects of composition, those which are entirely different in subject matter from the regular school work of the child. The Boston course of study cautions especially against using composition periods in working up papers upon geographical and historical subjects.(1) The following sources for themes are suggested.(2)

1. "Experiences with pets, games, gardens, natural objects, (animals, plants, minerals) and natural phenomena (results of heat, cold, wind, rain, snow)."

2. "Books containing stories, myths, poems, accounts of heroes, patriots, discoveries, &c."

3. Pictures..... "In the hands of one who understands their artistic values, beauty of line, space, form, light, shade, color and meaning, they may be used with great advantage in cultivating artistic sense."

7. Arithmetic, Algebra:

As far as the author has been able to determine, the work in arithmetic consists in completing some text, and in reviewing those parts of the book gone over in that and in previous years. Some of the topics are therefore new and some old. In the ordinary textbook there are from forty to fifty fairly distinct topics to be completed. The topics in the Southworth Stone Arithmetic, book lll, which is the text used in St. Louis, have

---

(1) Boston. School Document No. 5. 1907. p.19.
(2) " " " " " " p.17.

been analyzed below. Only those which seem to receive in that text somewhat distinct treatment, are given a separate topic. The topics are as follows:

1. Notation.
2. Addition.
3. Subtraction.
4. Multiplication.
5. Division.
6. Use of signs.
7. Equations.
8. Ratio.
9. Denominate Numbers.
10. Fractions. G.C.M. and G.C.D.
11. " Addition.
12. " Subtraction.
13. " Multiplication.
14. " Division.
15. Decimals, Notation.
16. " Addition.
17. " Subtraction.
18. " Multiplication.
19. " Division.
20. Interest.
21. Measurements, linear.
22. " surface.
23. " solids.
24. Percentage.
25. Insurance.
26. Commission.
27. Promissory Notes.
28. Commercial Discount.
29. Partial payments.
30. Taxes.
31. Compound Interest.
32. Bank Discount.
33. Stocks.
34. Government Revenues.
35. Bonds.
36. Exchange.
37. Bank Collections.
38. Proportion.
39. Involution and Evolution.
40. Square Root.
41. Cube Root.
42. Mensuration, curved surfaces.
43. Similar surfaces.
44. Mensuration.
45. Longitude and time.
46. Simple Algebra.

The content of the year's work is more complex than it would seem from these forty-six topics, owing to the introduction of puzzle problems and of practical problems embodied to enrich the subject.

8. Geography:

Under the head of geography, which is taught in nine of the eleven schools of the table, were usually included parts of the following subjects; astronomy, physical geography, natural history, ethnology; given as a preparation for the political and commercial geography which follows them. Under politdcal and commercial geography is included a study of the important countries of each continent. No system of organization was found except that of proximity, i.e. proceeding from the study of one country to the study of those adjoining usually after the following order; the United States, each section of the United States, Alaska, Canada,

Mexico, Central America, West Indies, South America, Europe, Africa, Asia and Australia, including Oceana.

9, History and Civics:

The courses of study in history resemble each other closely. The following outline of the course of study as given in New York[1] is accordingly a fair sample of those found elsewhere.

I. Discovery and exploration.

1. Geographical knowledge in Europe in the XV Century.

2. Trade with the East.

3. Important inventions.

4. Spanish explorations and claims; English; French; Dutch; the Indians, chief tribes.

II. Colonial development.

1. A study of Virginia, New York, Massachusetts and Pennsylvania; European conditions leading to colonization; character and purpose of the settlers; the settlements; hardships; successes; relations with the Indians; with the other colonies; with England; occupations; slavery; social life; education; spirit of liberty; forms of government; chief men.

Portions of the textbook relating to other colonies may be read.

III. Supremacy of the English; William Pitt. French and Indian War; cause, chief events, leading men, results, extent of English possessions.

IV. The Revolution, - Comparison of the rights of Englishmen in England and in America; causes remote and immediate; preparation and preliminary struggle; the leaders in America; feuds in England; Continental Congress; Declaration of Independence. The war; commanders, American reverses, hardships, victories; French aid, Paul Jones; Arnold's treason, Yorktown; results.

V. The Free Nation - Ordinance of 1787; confederation of states; difficulties in commerce, in finance, and in government. Constitutional Convention. Note; all dates memorized in preceding grades, applicable to the work of this grade, should be carefully reviewed.

---

(1) Course of Study. N.Y. Ethics, English, History and Civics. 1905. p.53.

Second half year.

I. Federal versus State Sovereignty.

1. Political parties. 2. Growth of territory. 3. Economic Questions; National Banks; Independent Treasury; tariff. 4. Slavery question; state rights. 5. civil war; effects on power of national government; abolition of slavery; economic effects.

II. Reconstruction. Negro Suffrage.

III. Economic progress since the civil war. 1. Population; immigration; growth of cities. 2. Money questions. 3. Manufacturing and commerce. 4. Investions and discoveries.

IV. Leaders in statesmanship, literature, science, and art.

V. The United States a World Power. 1. Monroe Doctrine. 2. Spanish War; foreign possessions. 3. Influence on the world's diplomacy; the Hague tribunal.

NOTE: All dates memorized in the preceding grades applicable to this grade should be carefully reviewed."

As to the organization of topics within these general headings, all depends upon the teacher in charge.

Although civics is grouped with history in the table, they usually receive separate treatment. The course in New York[1] consists of the following topics:

1. Three types of colonial government. Governors or proprietors, the assemblies.

2. Local government, town and county.

3. The articles of confedefation, chief provision, defects.

4. The Constitution, how formed and how ratified, the preamble.

5. Legislative department; congress, its house of representatives and senate; their duties. How a bill becomes a law. 6.The executive. The President and Vive President; election, duties.

7. Judicial. Supreme court, circuit court, district courts.

8. Interdependent of the three departments of the national government.

---

(1) New York. Course of Study and syllabus in ethics, English, history and civics 1905 pp 54-58

8. (continued)

(1) President's power in legislation.
(2) Senate's power over President's appointments.
(3) Power of impeachment.
(4) Power of the Supreme Court to determine the constitutionality of a law of congress.

9. Subordination of the military to the civil power.

10. Amendments to the constitution.
(1) Amendments I-X together constitute a bill of rights; amendments 11, 12, 13, 14, 15.

11. The State Government; the three departments; the chief officers.

12. The City Government; the three departments; the chief officers.

13. Increasing emphasis upon the duties and responsibilities of the citizen, as a member of a family, as pupil, as employer or employed, as voter, or as office holder.

10. Science and Nature Study:

Elementary science is taught as a separate subject in ten of the eleven schools mentioned in the table. The content of the course and its intensity vary greatly as shown below.

Chicago.(1) Animal life; plant life; phenomena of the sky; physical science; physiology.

Boston.(2). Matter, motion and force, liquid pressure and specific gravity, atmospheric pressure, heat, sound, light, electricity.

New York.(3) 1. Sound:- production, transmition through various media, reflection, pitch, intensity, musical instruments. 2. Heat:- sources, temperature, theremometer, effects of heat expansion, change of state, ebulition, liquifaction, evaporation,

---

(1) Chicago. Course of Study for the Elementary Schools.1904.p.34.
(2) Boston. School Document No.5. page 90.
(3) New York. Course of Study and Syllabus in Geography, Nature Study, and Elementary Science. 1907. p.39-51.

propagation; conduction, connection, radiation, radiator absorber, applications and illustrations.

3. Light:- sources, propagation, intensity, shadow, reflection, plane mirrors, refraction, simple lenses, prisms, color. 4. Magnetism and electricity:- natural and artificial magnetism; laws of attraction and repulsion, magnetic induction, terrestrial magnetism, static electricity, simple demonstrations of positive and negative electro factions; current electricity, simple cell, conductors and non conductors, effect of current on magnetic needles, electromagnet, induced currents, applications and illustrations.

11. Physiology:

Eight of the eleven cities teach physiology. As far as an examination has been carried the content is presented under the three familiar headings,- anatomy, physiology and hugiene; as in the ordinary elementary school textbook in physiology.

12. Physical Training:

Nine of the eleven schools have a time set apart for physical training. Beyond the general heads of games and gymnastics, it is impossible to determine from the courses of study the nature of this training.

13. Drawing:

Drawing is taught in every city of the table, with a weekly time allotment (simple average) of twenty-seven minutes. The work consists of art for its own sake. The outline of the Boston course will show the general nature of the work.(1)

---

(1) Boston. School Document No. 5. 1907. page 72.

13 (continued).

I."Representation.

1. Nature. Flower sprays and trees.

2. Objects. Proportion, fore-shortenings and effects of distance.

3. Figure and animal pose.

II. Design.

1. Specific manual training model in pencil outline or paper cutting. Space division in variously enclosing shapes.

2. Color standards. Expressed in scales of hue, value, and intensity. Color applied to design. Harmony.

3. Composition. Grouping of objects. Landscapes and flower sprays in color.

No indication of an attempt to base drawing upon the subject matter of other studies has been found in this investigation.

14. Music:

15. Manual Training:

Manual Training and Cooking are taught in seven cities of the table. Boys enrolled for shop work and girls for domestic science. The object of the manual training is to give practice in the use of tools and in making objects ordinarily used in the home. The girls learned to design and to make women's clothes, to cook and to take general care of the home.

16-17. Business, Foreign Languages:

The remaining subjects; stenography, bookkeeping, Latin, French and German are taught in so few schools and so little could be learned of the work that no discussion is possible.

In the following chapter the curriculum as presented here will be discussed,with regard to first, the amount of material contained in such a course, and second, with regard to the nature of the subject matter presented.

CHAPTER II.

Criticism of the Modern Curriculum.

Part 1.

The Crowded Condition of the Course of Study.

The author takes it for granted that school men, even the superintendents of the schools in the table, will admit that the course of study as exhibited here is over-crowded, that there is too much work to be done in 1,500 minutes a week, for ten months. The general complaint from teachers and superintendents, and the frequency of the "crowded curriculum" as a topic of Educational literature leads to this view no less than the very appearance of the thing. It may be that the curriculum contains little that is not useful to the child in every day life. The author only wishes to ask, here, if the work of the eighth grade as outlined above, and in the form in which it is given, is not too much to be thoroughly completed in one year.

The weekly programme shows in a mechanical way this crowding. New York has twenty-nine 40-minute periods a week exclusive of the time devoted to opening exercises, physical training, hygiene and music.(1) If one might apportion these studies upon the basis of the allotments of the same subjects in other schools, there could hardly be less than seven recitations each day. In St. Louis, where the number of recitations in each subject are

(1)Course of Study for the elementary schools of the City of N.Y.p.2. (1905)

stated in the printed course of study, there are thirty-three recitations a week, not including opening exercises. Including these there would be seven recitations two days in the week, and eight the other three days. This gives the division of the child's energies due to the number of recitations.

The change from the recitation of one subject to the recitation or study of another subject represents an important element which lessens the amount of time which is efficiently devoted to each subject. The mere mechanical change requires some time. To this must be added the time required to get the right set of the mind toward each new subject. This latter accommodation varies in the amount of time required, with the individual, with the degree of difference between the idea left off and the one to be begun, and with the complexity of the idea to be begun. The great number of studies of the weekly programme (from 12 to 19) and the consequent frequency of the changes makes the loss from this source considerable. This loss is, moreover, made greater by the fact that there is little or no correlation between the subjects as they occur in the daily programme. There is apt to result from this shifting of attention, moreover, considerable confusion in the ideas required.

Still another difficulty, resulting from the great number of separate ideas represented in the curriculum, is that of carrying so many different lines of thought in the mind at one time. While the author has been unable to find, or to carry on any experiments

to obtain exact data as to the effect of this dissipation of the child's energies, it is a maxim that progress is hindered by anything that hinders concentration. If this be true, how to diminish the number of unrelated topics becomes an important problem.

Elimination has been proposed as a remedy for the present crowded condition of the curriculum. But as Dr. Frank Mc Murry points out, such a process can only be applied to the topics within the subjects, and not to the subjects themselves.(1) The two Mc Murrys have shown how much may be accomplished by this method.(2) Young, in arithmetic,(3) and Mace in history,(4) have worked out the process of elimination somewhat in these subjects. Articles are appearing suggesting a like work for other subjects. About all that can be accomplished in this way, is to keep out unessentials, for new topics are being added as fast as useless ones are eliminated. Elimination,, therefore, offers no real solution for the difficulties brought out in the preceding paragraphs.

---

(1) McMurry, Frank. N.E.A. 1904. pp.194-202.
(2) " The Method of the Recitation, Chapter X.
(3) Young. The Teaching of Mathematics, p.220 and following.
(4) Mace. Method in History. The entire book.

CHAPTER II.

Part 3.

Dewey's Criticism of the Modern Curriculum.

The difficulties reviewed in the preceding sections are of a mechanical nature, i.e., they grow out of the complexity of the daily programme and course of study. These difficulties remain, even if the present curriculum be admitted to represent an adequate selection of the "aims, meanings and values ~~of~~ incarnate in the matured experience of the adult", (Dewey "The Child and the Curriculum", p.7-8); but modified to suit the immaturity of the child. Serious criticisms, however, are made upon just this selection and modification. The best known of these ctiticisms is found in Dewey's four books "The Child and the Curriculum", "The Relation of Interest to the Training of the Will", "The Educational Situation", and "The Ethical Principles Underlying Education". The criticisms found in these books, after allowance is made for the inadequacy of the single extract to express a position fully, may be summed up as follows: "The fundamental factors in the educative process are an immature undeveloped being; and certain social aims, meanings, values incarnate in the matured experience of the adult. The educative process is the due interaction of these forces." Difference of opinion has, however, emphasized now one, now the other of these forces until we have three (and more) fundamental divergences.

"First, the narrow but personal world of the child against the impersonal but infinitely extended world of space and time; second, the unity, the single whole-heartedness of the child's life, and the specializations and divisions of the curriculum; third, an abstract principle of logical classification and arrangement, and the practical and emotional bonds of child life".(1)

Three evils arise from these divergencies:

1. Because of insufficient apperceptive bases, the child gets, not meaning but mere words.(2)

2. There is lack of motivation.(2)

3. Even the logical element is lost in attempted simplification.(2)

In addition to these evils, Dewey points out that in the absence of motives within the subjects, an artificial interest is created, for the following reasons:

"1. It is possible for the mind to develop interest in routine or mechanical procedure, if conditions are continually supplied, which demand that mode of operation and preclude any other sort".(3)

2. To learn the lesson is more interesting than to take a scolding, to be held up to general ridicule, stay in after school, receive degradingly low marks.(4)

---

(1) Dewey. "Child and the Curriculum", p. 11.
(2) " " " " " pp.30-4.
(3) " " " " " pp.35-6.
(4) " " " " " pp.37-8.

Applied a little more specifically to school practice these criticisms may be stated in this manner. The trouble seems to be that the subjects of the curriculum are taught without regard to their functions in the solution of the problems of adult life outside the school, or in the solution of the problems present to the child. He recites daily seven or more distinct, and, as far as presentation is concerned, unrelated subjects, with scarcely a thought of the application of the ideas gained to his own or to other people's problems. That the course of study should have relation to the problem present to the child, or that he should recognize the function of the school studies in solving the problems of life outside the school, seems to have not been considered in the making of courses of study. The seriousness of this failure is shown by Dewey in his "Interest as Related to Will", p. 1-34.

CHAPTER III.

Introduction to the Conditions and Method of the Experiment.

The Purpose of the experiment: The purpose of the experiment, was to discover, if possible, a way of avoiding some, at least, of the difficulties pointed out in the two preceding chapters.

The School: The experiment, was done in the Teachers College Elementary School, University of Missouri. The course of study in this school is arranged on the basis of seven grades, as in Kansas City, Missouri. The work embodied in the experiment was that of the seventh grade, and represented therefore the completion of the grades.

The Class: The class which did the work of the experiment consisted of 13 pupils, 7 girls and 6 boys. The girls were aged respectively, 14, 14, 13, 13, 12, 12, 12; the boys, 14, 13, 13, 13, 12, 11. Nine of this class had attended previously the Teachers College Elementary School one year. One of these nine had with this exception, never been at school before, having been taught at home. The training of three of the twelve had been somewhat irregular, on account of their having moved about from town to town. Two other pupils had been irregular during much

of their school life, because of sickness. Altogether the class compared rather unfavorably with average seventh grade classes.

The teacher: All the teaching was done by the author, who had taught previous to trying the experiment, two terms in high school history, four years in rural schools, and one year as principal of the Teachers College Elementary School. The author was unable to give his whole time to the experiment, as he was doing at the same time, work as a graduate student, as well as assisting in planning the work of the 4th grade. The time given to efficient teaching was further lessened by the difficulties presented in organizing the course of study, and in obtaining requisite data.

The Equipment: The seventh grade had study room in common with the 5th and 6th grades. Some recitations were held in this room. For the most part, however, recitations were held in another room, or in a hall adjoining the study room. There was no laboratory nor apparatus. What apparatus was needed had to be constructed or borrowed. The library facilities of the school itself were fair and were supplemented by the use of the University library. Aside from library facilities the whole equipment was very much inferior to that found in the average ward school.

Method: The year was spent in studying the development of the United States, by reproducing each period in the development with its dominant problems. These problems became real problems in two ways; (1) in tracing back to its cause, some growth or occurrance, (2) in reliving in imagination the problems of the people of each period. Ultimately all problems became of the second sort. The method followed in the study of these problems was as follows: (1) The situation out of which the problem arose was reproduced as vividly as possible in imagination, so that the real difficulty would be felt, and the need for a better state of affairs, desired. (2) The pupils were then led to offer possible ways of alleviating the difficulties, and then to consider in what way such problems were really solved. To make the problems more real they were made, wherever possible, the problems of the character, or characters, most instrumental in their solution.

The presentation of most of the situations, and the solution of the problems arising from them, involved necessarily, a study of the economic, social and cultural conditions of the time. Where such conditions were not directly involved in the problem being discussed, they were given as a background, or setting for the problem itself.

The subject matter of the studies of the curriculum, as given in the table on page 2, was made use of whenever it was needed in the solution of some of the above problems. Just how much and in what way the subject matter of each study was involved, will be shown in Chapters IV, V, VI and VII.

CHAPTER IV.

An Outline of the Experimental Course of Study for the Seventh Grade.

I. How America was peopled.

1. Why Europe sought a new route to India.
2. How Europe found America.
3. How America was proved to be a separate continent.
4. How each country established its claims here.
   a. Spain.
   b. France.
   c. England.
   d. Others.

II. How England grew in power.

5. Why England's attempts are more important to us than are those of any other country.
6. How England occupied the east coast of the United States.
   a. How the first attempt terminated.
   b. How they made a permanent settlement in Virginia.
   c. Why New England was settled and how it prospered.
   d. How New York was secured.
   e. Why Pennsylvania was settled.
   f. Why Maryland was settled.
   g. How the South was settled.
7. Why the Indians gave trouble and how.
8. Why there was a collision with France and how it terminated.
9. How the colonies prospered under English rule.

II. How the colonies secured their independence.

10. Why they demanded more self government.

11. What policies England adopted with regard to this wish, and how the colonies met them.

12. How the colonies were led to assert their independence.

13. How they secured it.

IV. How the United States became a nation.

14. Why they had now to form a new government, and how they did it.

15. How the new government was set going.

16. Why political parties arose.

17. What good the federalist party did for the country and why it declined.

18. How the growth of the national feeling showed itself.

a. Adams defied France.

b. Jefferson bought Louisiana.

c. English agressions were stopped by the war of 1812.

d. The war helped strengthen national feeling.

e. New signs of national life appeared. 1815-30.

19. How the common people really took a hand in the government, under Jackson.

V. How the country was divided.

20. Why sectional feeling arose.

21. Why the South struggled for more slave territory, and how the North attempted to check them.

22. How the abolitionists widened the breach between the two sections.

23. Why the South changed their attitude towards slavery.

24. Why the South seceded.

I. How the country was re-united.

25. How they were forced back into the union.

26. How a reconcilliation between the two sections was accomplished, and how the South recovered from the effects of the conflict.

II. How the United States became a World Power.

27. How the United States grew in influence in America. The Monroe Doctrine.

28. How we obtained foreign possessions.

29. How our influence on the world's diplomacy grew. The Hague tribunal. The Russian-Japanese war.

I. What the modern problems are.

30. What should be done with the negro?

31. What should be done with the immigrant?

32. What should be done with the Indian?

33. How find a short route to the Pacific?

34. How preserve our national resources?

35. How the government can be of daily assistance to the people; a study of the administrative department and their services.

X. The United States today. Final organization.

36. Territorial growth. 1790 to 1900.

37. Growth in population. 1790 to 1900.

38. Growth of cities. 1790 to 1900.

39. Growth in industries.

40. Growth in culture.

41. Improvement of ordinary conveniences.

42. Development of national resources.

The above topics represent the main problems put before the child. In the solution of these, many sub-topics such as the home life, industries, culture and religion of the people; and the biographies of men most prominent in working out the problems are taken up. A serious effort was made to reproduce the life of each period as a background to the problem of that period. The main divisions, as indicated by Roman numerals, occupied approximately one month each.

One topic, topic 25, How the Southern States were forced back into the Union, will be given below in detail to show just how such problems were worked out. The general sub-topics were as follows:

I. A comparison of the North and South at the beginning of the war.

II. How the war began.

III. How the North ended the war.

IV. How supplies were secured and distributed to the army.

V. What the negro did during the war.

VI. How the people at home lived during the war.

1. In the North.

2. In the South.

VII. What problems grew out of the war.

NOTE: Parts IV, V, and VI run parallel with the first three parts. Part VII is introductory to the following topic (26) and so is not discussed below.

The work of the class in solving these problems will be given in some detail below.

I. A comparison between the North and the South at the beginning of the war.

1. Area and position. After finding the total territory controlled by each section, by adding the area of the several states controlled by each, the results were compared. Estimates were made of the territory controlled by two sections in states which were divided in sentiment. These estimates were checked with those made by Harte, in "Essentials of American History", pp.413-431. The total territory controlled by each section was found. The location of the country, its nature, and the means of communication were briefly discussed.

2. Population and military strength. The population of each section was estimated in a way similar to that used in finding the total area. Allowance was made for the nature of the negro population. Estimates of the fighting population (from 16 to 60 years) were made, and checked with similar estimates made by Harte, The sources of information were Census of 1860, and Harte's "Essentials in American History".

3. Navy. The fact was brought out that the North from the early history of the country had owned practically all the ships. The consequence to southern commerce was predicted.

4. Wealth and resources.

   a. The wealth of each section was found by adding (as in 1 and 2) the wealth of the states of the respective sections. What constituted this wealth was shown.

   b. The resources of the two sections were compared to see how dependent each was upon foreign countries for supplies. The North was found to contain most of the manufactories as well as mostof the food crops. The South depended upon the sale of cotton for its manufactured supplies, as well as for much of its food. For such food supplies as were raised in the South and for its cotton crop the South depended upon the negro.

5. The South was found to have the following advantages:

   a. Those of defensive warfare. A consideration of natural barriers and fortifications was carried on.

   b. At the outset of the war the South was better prepared as to officers and equipment.

NOTE: These five topics were embodied in a paper called "A Comparison between the North and the South during the Civil War". See appendix, part I.

6. Foreign relations. The chief emphasis was given to England. The following facts were shown.

   a. The dependence of English textile manufactures upon southern cotton, and the importance of the southern marker for the sale of all English manufactured goods.

   b. The attitude of England towards slavery.

The following selections were read in class:

Lowell. "Jonathan to John".

Bright. "On the Trent Affair" (English oration).

These selections were read to give contemporary touch to the relation of England to the secession movement, and therefore for information rather than for literature.

The sources of information for this topic (I) were:

Mace. "School History of the United States".

Woodburn and Moran. "American History and Government".

Harte. "Essentials in American History".

Tarr and Mc Murry. "Geography." Book II.

Bogart. "Eeconomic History of the United States".

Coman. "An Industrial History of the United States".

Wright. "The Industrial History of the United States".

Abstract of the Census. 1906.

II. How the war began.

1. Fort Sumpter.

2. The rush of troops to the South.

3. Bull Run and its effects.

In connection with these topics the following selections were read:

Poems.

Stoddard. "Men of the North and West".(1)

Bryant. "Our Country's Call".(2)

---

1) Eggleston "American War Ballads". Vol.I. pp.174-5.
2) " "American War Ballads". Vol.I. pp.178-81.

Pike. "Dixie".[1]

Randall. "My Maryland".[2]

Prose.

Coffin. "Boys of '61". The first three chapters.

Harte. "The Romance of the Civil War". pp.119-30.

III. How the North ended the war.

1. By blockade. The reason for the blockade was shown. The blockade was made easier by the nature of the southern coast.

a. How the blockade runners helped the South. A discussion arose as to the effect of their being painted grey or slate color. The importance of the battle of the Meramec and the Monitor. The following selections were read in class:

Longfellow. "The Cumberland".[3]

Baker. "On Board the Cumberland".[4]

2. By securing the border states.

a. Special attention was given to Missouri. How Lyon and Bland saved the state. The battle of Wilson Creek. Guerilla warfare.

The following selections were read as references:

Music. "Stories of Missouri". pp.222-80.

Perkins. "History of Greene County". pp.372-82, and pp.302-30.

Williams and Loeb. "Civil Government and History of Missouri". pp.180-218.

Sketch of the History of Missouri,in the World's Fair edition of "Missouri". pp.16-32.

Stanley. "Order No. 11".

b. Kentucky, West Virginia, Arkansas and Maryland.

---

(1) Eggleston"American War Ballads". Vol.I. pp.193-7.
(2) " " " " " II. pp.6-9.
(3) " " " " " II.
(4) " " " " " II.

3. By opening the Mississippi River.

   a. Why the North wished to open the river.

      1. To aid in transportation.

      2. To cut off from the eastern army the resources of Arkansas, Louisiana and Texas. Special emphasis was given to the importance of this section in furnishing meat to the southern army.

   b. How it was done.

      1. By capturing New Orleans and Island No. 10.

      2. By the capture of Vicksburg.

The following selections were read in class:

Melville. "Running the Batteries".(1)

Harte. "Source Readers". Vol.IV, pp.312-20.

4. By cutting the Confederacy in two.

   a. The war in Tennessee.

   b. Why Sherman marched to the sea, and what he did on the way to injure the South.

The following selections were read in class:

"Marching Through Georgia".(2)

"Sherman's March to the Sea".(3)

NOTE: A paper was written upon this topic.

5. By defeating the army of Virginia.

   a. The peninsular campaign.

   b. Antietam.

   c. Fredericksburg and Chancellorsville.

   d. Gettysburg.

---

(1) Eggleston's "American War Ballads". Vol.II. p.120.
(2) " " " " Vol.II. p.273.
(3) " " " " Vol.II. p.195.

The following selections were read in connection with this topic:

Harte. "John Burns of Gettysburg".(1)

Whittier. "Barbara Fritchie". (2)

Stedman. "Wanted: A Man".(3)

e. Grant's "hammering" process. The class read the following poem:

Read. "Sheridan's Ride".(4)

f. The surrender. How the southern soldiers were treated. Reports were made upon this subject by members of the class. The reports were based chiefly upon the following books:

Bruce. "Robert E. Lee".

Fitzhugh Lee. "General Lee".

The following poem was read in class to close the topic:

Ryan. "The Conquered Banner".(5)

6. The Union loss during the war. This was worked out from a report made by a committee which investigated the deaths in the Philippines and compared them with deaths in other wars. A paper was written upon the statistics secured which I give below. See appendix No. 2.

IV. How supplies were secured and distributed to the army. The business side of the war.

1. How the soldier was cared for in camp and on the march.

a. Life in camp. Selection of the camp. The children took an excursion into the woods to select a camp. By questioning and by reading the "Infantry Drill Regulations" (United States Army) pp.191-6, they were led to consider in the selection the following points:

---

(1) Eggleston's "American War Ballads". Vol.II, p.150.
(2) " " " " Vol.II. p.95.
(3) " " " " Vol.II. p.88.
(4) " " " " Vol.II. p.72.
(5) " " " " Vol.II. p.204.

(1) Protection.

(2) Healthfulness.

a) Necessity of sunlight. The value of sunlight for living rooms was brought out.

b) Good drainage. The effects of stagnant water and low ground were considered.

c) Good water supply. The dangers of impure water were discussed.

(3) Fuel and forage near.

b. The hygiene of the camp, showing how essential it is to the health of an army that everything, especially around the camp kitchen, be kept clean.

c. Tents. A description was read from Harte's "Source Reader", Vol. IV, pp.220-30. The importance of keeping off the damp ground was emphasized.

d. Clothes.

(1) Kind and color compared with the present. The reasons for the modern color were considered.

(2) The importance of good shoes, and care of the feet.

(3) Cleanliness.

NOTE: Present application was made in every case.

e. Food. A description was read in class from Harte's "Source Reader", Vol. IV, pp.226-30. The importance of a variety of foods was discussed, as well as the importance of proper cooking. The need of pure water was brought up, and the use of the filter, boiling, and distilling, considered. The class examined an army canteen which belonged to a Massachusetts regiment during the civil war. The question arose as to why it was covered with white cloth. Several offered the hypothesis that the white cloth was meant to keep it cool. To prove, they filled a number of tin cups with water, covered each with a different colored cloth, and placed them in the sun. After setting in the sun half an ~~hour~~ day the temperature of each was taken. The cup covered with white cloth was found to be the coolest of all.

f. Hospital. The following topics were taken up:

(1) Contagious diseases; measles, mumps, smallpox, and itch. The danger in the case of the first from exposure to bad weather was brought out.

(2) Field and ward service. The crudeness of the methods and the makeshift self-treatments were compared with modern medical science. "First Helps in case of Accidents" were discussed briefly.

In connection with this topic the following selections were read:

Hart. "Source Reader". Vol. IV. Numbers 99 & 100.

Harte. "How are you Sanitary".(1)

Johnson. "A Woman of the War".(2)

"Woman's War Mission."(3)

Conte. "Somebody's Darling".(4)

g. Amusements. Stories of the pastimes of the soldiers from readings in Hart's "Source Reader", Vol. IV, and from Coffin's "Boys of '61", were told by the class.

h. The cost of the war and how the money was provided. What was done is shown very well by a paper written by one of the class. See appendix No.3.

V. What the Negro did during the war. The loyalty of the negro to his southern master was shown. Stories were read from Hart's "Source Reader", Vol. IV, of the negro during the war.

VI. How the people at home lived during the war, (a) in the North, (b) in the South. Care was taken to show that those in battle were not the only ones who suffered. The hard times at home from lack of labor &c. were discussed. The worry at home for friends and kinsmen in the army was also pointed out. The following poems were read to bring out this latter

---

(1) Eggleston's "American War Ballads". Vol. II. pp.241-2.
(2) " " " " Vol. II. pp.265-70.
(3) " " " " Vol. II. pp.156-9.
(4) " " " " Vol. II. pp.207-8.

point more clearly.

Riley. "The Old Man and Jim".(1)
"Reading the List". (2)

Walles. "The Guerillas". (3)

Osgood. "Driving Home the Cows".(4)

Winter. "After All". (5)

At the close of the study as outlined above, an afternoon was taken for the reading of poems which were especially descriptive of the civil war. The reading and the discussion of these poems were very informal. The following poems were read:

Beers. "The Picket Guarde".(6)
"The Countersign".(7)
"There's Life in the Old Land Yet".(8)

Thompson. "Music in Camp".(9)
"Three Hundred Thousand More". (10)
"The Year of Jubilee".(11)

Bolton. "Left on the Battlefield". (12)

O'Connor. "Reveille".(13)

Stanley. "The Fancy Shot".(14)

---

(1) Long. "American Poems". p.296.
(2) Eggleston's "American War Ballads". Vol.II. pp.263-4.
(3) " " " " " pp.245-8.
(4) " " " " " pp.211-13.
(5) " " " " " pp.214-50.
(6) " " " " " pp.12-14
(7) " " " " " pp.14-19.
(8) " " " " " pp.26-8.
(9) " " " " " pp.99-103.
(10) " " " " " pp.160-2.
(11) " " " " " pp.202.
(12) " " " " " pp.209-11.
(13) " " " " " pp.218-20.
(14) " " " " " pp.200-201

CHAPTER V.

The subject-matter of problem 25, classified after the manner of the present elementary curriculum.

If the content of the topic just described be grouped after the manner of the ordinary school curriculum, a better order of subjects will be followed as given in the discussion of the modern curriculum on page 2.

Opening Exercises:

The seventh grade had assembly room and study hall in common with grades V and VI. The opening exercises, therefore, with the exception of one programme consisting of civil war songs, were not in any way correlated with the topic being investigated.

Reading:

The reading of the three weeks spent in studying the civil war consisted of the following selections. References to books in which these selections are found will not be given, as such references have already been given in the footnotes of Chapter IV.

Lowell, "Jonathan to John".

Bright, "On the Trent Affair".

Stoddard, "Men of the North and West".

Bryant, "Our Country's Call".

Pike, "Dixie".

Randall, "My Maryland".

Melville, "Running the Batteries".

Author unknown, "Marching Through Georgia".

" " "Sherman's March to the Sea".

" " "Tramp, Tramp, Tramp".

Whittier, "Barbara Fritchie".

Harte, "John Burns of Gettysburg".

Read, "Sheridan's Ride".

Ryan, "The Conquered Banner".

Harte, "How are you Sanitary".

Johnson, "A Woman of the War".

Conte, "Somebody's Darling".

Riley, "The Old Man and Jim".

Author unknown, "Reading the List".

Walles, "The Guerillas".

Osgood, "Driving Home the Cows".

Beers, "The Picket Guard".

Winter, "After All".

Author unknown, "The Countersign".

Stanley, "The Fancy Shot".

Randall, "There's Life in the Old Man Yet".

Author unknown, "Three Hundred Thousand More".

Bolton, "Left on the Battlefield".

Author unknown, "The Year of Jubilee".

O'Connor, "Reveille".

Thompson, "Music in Camp".

Sheperd, "Roll Call".

This list, comprising thirty-two selections and ninety-five pages, seems at first sight somewhat long, both in the number of selections and in the number of pages. If the aim

had been to study each selection as a thing for itself, and to make the most of it as literature, the length of the list of selections would make the accomplishment of this aim impossible. The whole purpose of the selections, however, was to make vivid and to give setting to the civil war. The poems were chosen with this end in view. There are, accordingly, some selections in the list which are scarcely up to the standard of the literature usually read by seventh grade classes. The poems are, however, all of sufficient merit to be embodied in Eggleston's "American War Ballads", and six of them are regarded by A.W.Long as of sufficient worth to be incorporated in his "American Poems".

In harmony with the aim set up, the attention of the class was directed almost wholly to the content of these selections, noticing only incidentally the other elements of composition, when the rythm or word selection seemed particularly a part of the description itself. None of the selections were prepared by the whole class. Sometimes one of the class prepared a selection to read before the class at the appropriate time when the ideas with which it was concerned were being discussed. Other selections were read by the class, reading in turn.

Writing:

No writing exercises as such were given. Each of the class copied neatly in ink, the papers which he wrote. Any direction as to penmanship, arrangement of papers, or neatness, were corrective and incidental.

Spelling:

All words missed in the written work were marked by the teacher and corrected by the child in whose composition the mis-

spelled words were found. At the end of each week the words missed during the week were given in a spelling lesson. The total number of words misspelled during the three weeks spent in studying this topic will be given below. The list is probably smaller than it would have been had the pupils not been allowed to use a dictionary while writing their papers. The list is as follows: pepper, scatters, exclamatory, Mormon, many, Confederate, expensive, borrowed, laid, re-enlisted, Louisiana, directly, until, their, splash, disreputable, Calhoun, amounts, religion, marry, missed, waste, from, revenue, trade, declared, foreign, raised, rarely, recognized, speech, before, belief, Bible, having, by, equivalent, problem, loss, shovel, ceded, distributed, barb, cost, Fredericksburg.

NOTE: Some of these words were no doubt misspelled through carelessness or through a slip of the pen. There seems, however, to be no way to distinguish between such mistakes and those made from lack of knowledge of the correct spelling.

Composition:

What was done in composition work may be indicated as far as written exercises are concerned by a list of the topics upon which papers were written. These papers, with the exception of the first and seventh were written as reports by one or more pupils, to the rest of the class. The list is as follows:

1. A Comparison of the North and South at the Outbreak of the Civil War.

2. How the Confederate Constitution differed from the Federal.

3. Can Sherman's March to the Sea be justified?

4. How the Soldiers were cared for.

5. How the Southern Soldiers were treated by the Victors.

6. How Prisoners of War were treated by each side.

7. The cost of the Civil War.

The scope of papers 1 and 7, which were written by the whole class, was somewhat determined before they were written, by leading the pupil to point out the points appropriate to be considered. For example, it was determined by questioning that a comparison of the North with the South should include the following points:

1. Area and Position.

2. Population and Military Strength.

3. The Navy.

4. Wealth and Resources.

Papers 2, 3, 4, 5 and 6 were left entirely to the individual pupil. For further discussion of the method followed in composition the reader is referred to the treatment of that subject in Chapter VI.

Special attention was given by the teacher to the oral side of language work. Narrations, descriptions, and expositions of considerable length were given by the pupil in making reports to the class upon investigations which had been assigned to them. Care was taken to cultivate clearness, the organization of material, and a distinct enunciation of words. There were no separate periods for such exercises.

Grammar:

No grammar was taught except what was necessary to cor-

rect mistakes in oral and in written language. For the method followed see the discussion on grammar in Chapter VI.

Arithmetic:

Classified as in ordinary grammar school texts in arithmetic. The following processes were involved:

1. The four fundamental processes.

2. Common fractions, except those with small denominators, were as little used as possible. Preference was given to decimals.

3. Decimals and the reduction to common fractions.

4. Percentage (the equivalents were usually stated in aliquot parts, for additional clearness).

5. Taxation.

   a. Import duties.

   b. Direct taxes on manufactures &c.

   c. Excises.

   d. Stamp.

   e. Income.

6. United States money. (Civil war currency).

7. Stocks and bonds.

8. Interest on the national debt.

9. Square measure. (In estimating the area of portions of Kentucky, Tennessee, Missouri and Virginia.)

10. Measurement of temperatures.

One topic is given below to show just how much and what kind of arithmetrical work was involved. For an idea of the other topics, the reader is referred to the papers and the appendix, in which the results of investigations, embodying much

arithmetrical work, are to be found.

Topic: A Comparison of the North and South at the Outset of the Civil War.

The area of each section was estimated by adding that of the states in each section. Estimates were made for such portions of the border states as were affected by divisions in the sympathy and consequently in the allegiance of the people in such states. Comparisons were made in percent. In a similar way the population and military strength, the navies, and the wealth and resources, (including manufactories, railroads &c.) were compared.

In all the work, whenever comparisons were to be made, the basis of such comparisons was sought in statistics. Problems were thus constantly coming up; but because of the impossibility of keeping a record of such chance problems, only such as were of considerable length were recorded. Of the list of processes given as constituting the work of these three weeks none involved any principles, which the children had not at some time previously known. The income tax was new in content, but as soon as the idea of the principle of the tax was obtained, none of the class had any difficulty in computing such taxes.

The method followed was the same as that used throughout the course. For discussion of this method, the reader is referred to Chapter VI.

Geography:

A serious effort was made to have the location of every place mentioned clearly in mind. In the comparison of the two sections, a clear idea of the area and of the natural resources

of each section was obtained. The modification of campaigns by land conformations and by climate was emphasized at all times. A working idea of the nature of the seacoast and of the navigable rivers was found to be essential to any adequate notion of the difficulties of the blockade. The whole economic background of the war, including the starving out policy illustrated in Sherman's Campaign to the Sea, and in Sheridan's raid, is based upon the consideration of the resources and facilities for transportation peculiar to each section.

History:

The part of the outline which corresponds to the ordinary textbook would constitute the form of history work. The whole content, however, is historical, and such correspondence could be brought about in two ways: (1) By the condensation of the subjects treated with more fulness than in ordinary textbooks, and (2) by the elimination of those topics not treated in such texts at all.

Civics:

The portion of the work as outlined, which dealt with the comparison of the Confederate Constitution with the Federal, and which treated of the action of the state legislatures, especially of the legislature in Missouri, could be classified as civics.

Science:

The work in science consisted for the most part of matters of hygiene. The scope of the work is shown by the following outline:

1. Why grey cannot be seen so well as white. (This discussion arose in connection with the color of uniform and of blockade runners).

2. The effect of sunlight as a sanitary agent.

3. Drainage, the effect of stagnant water.

4. Dangers from drinking impure water. (The method and effect of filtering, boiling and distillation of water was discussed).

5. Keeping off the damp ground.

6. Cleanliness about the camp.

7. Clothes, the relation of material to the conduction of heat, and the relation of color to heat absorption.

8. Care of the feet.

9. Contagious diseases; measles, mumps, smallpox and itch.

10. Hospital service. First helps were discussed briefly.

Physical Training, Drawing:

The work in physical training was given apart from the work as outlined. No exercises in drawing, aside from maps, were required as a part of the study of the Civil War. It was interesting, however, to note that three of the boys made drawings of objects which had interested them, of their own initiative.

Other Subjects:

The rest of the subjects in the list given on page 2 were either not given or had no part in the work as outlined.

CHAPTER VI.

Analysis of the Course of Study as outlined in Chapter IV after the manner of the ordinary curriculum.

—

In order to show more clearly the exact contents of the work outlined in the problems above, Chapter IV, and to show the relation of the usual content of school subjects to the solution of these problems, the year's work is organized below as school subjects. It must not be thought, however, that any such organization was made for or by the pupils in the course of the experiment. It represents only an examination of the year's work after it had been completed, to see in how far it fulfilled the scope of the ordinary curriculum as discussed in Chapter I.

1. Opening Exercises:

Opening exercises were not based upon the study of the United States and its development. The presence in the same room of two other grades, each having a different course of study, made such a plan impossible.

2. Reading;

All of the reading of the year was based upon the history of the United States. With a few exceptions, such as foreign orations and Dickens "American Notes", all the selections read were from American authors. These selections were made according to two purposes: First, for the descriptive matter they contained relative to the topic in hand, and second, for their worth as illustrations of the culture of the period in which they were produced. Oftentimes, as in the case of Franklin's autobiography

and Whittier's "Snowbound", these two purposes became one.

The loose way in which the term "reading" is used, makes it necessary to define its meaning for this paper. Ordinarily this term is meant to cover, first, the special exercises of the school devoted to the cultivation of the ability to appreciate and to express orally the printed page, and second, what is known as outside reading. This latter consists of such readings for one's own self as is done in study periods and such reading of library books as may be done by request of the teacher or for the pleasure of the student. The reading in the elementary school where the experiment described in this paper was carried out, cannot be divided according to the meaning above. As will be shown below, selections were read orally both in what might be called the recitation period and in the period used for preparation for recitations. Much other than oral reading was also done.

The method in reading orally was as follows: When information primarily was sought, either one member of the class prepared the reading and read to all the class, or the class read at sight, reading the paragraph or a page in turn. As the purpose stated above was to impart information, the attention in such reading was given to interpreting the printed page so clearly that the rest of the class could understand it. In case a pupil fell short of this criterion, the stanza or paragraph was re-read by another member of the class. The reproof implied in this repetition was sufficient to insure better efforts next time. Occasionally the repetition was required of the pupil who failed to make himself understood the first time.

The material containing information covered a wide range of topics; history, stories, travels, poems and orations. In

such cases where the style seemed to be particularly a part of the description itself. Illustrations of such instances are, in poetry, Poe's "The Bells", and in prose, the impassioned style of many war time orations.

This method of obtaining information was not all under the immediate supervision of the teacher. In the solution of the problems as outlined in the beginning of Chapter IV, part of the data needed could be found in but one or two books. In such a case, therefore, the class was divided into groups equal to the number of books accessible. The method of reading in such cases was the same as that described above, under method of oral reading. An additional motive for this oral reading was afforded by the presence of a girl forbidden by the oculist to use in the least her eyes. All data used by her was obtained by having some classmate read to her, and so well was this done that she was enabled to maintain high standing in class.

The selections read were often very long, sometimes as much as twenty or thirty pages. The pupils did not weary of it. Care had to be taken, of course, not to give long readings in expository or technically descriptive selections.

The method described in the three preceding pages pertain primarily to the obtaining of information. The same method in general was used in the study of the selections chosen primarily for their literary value. (See page) After this value had been appreciated it was used as a symbol for the culture, especially the literary attainments, of the age in which it was produced. As was pointed out on page a selection might answer both of two purposes, (1) for direct information, (2) for lit-

erary value. Any attempt, therefore, to divide the selections according to these two purposes should only be done in a relative way. Some of the selections read primarily for their literary value were:

Aldrich. "Unguarded Gates".

Bryant. "The Death of the Flowers".

Bryant. "To a Water Fowl".

Drake. "The American Flag".

Emerson. "The Snowstorm". (compared with "Snowbound")

Franklin. "Autobiography. (Selections)

Hay. "Jim Bludso of the Prairie Belle".

Hawthorne. "The Gentle Boy".

Hayne. "The Mocking Bird".

Key,F.S. "Star Spangled Banner".

Lincoln. "Gettysburg Speech".

Lowell. "What is so Rare as a Day in June".

Lowell. "Selections from Bigelow Papers".

Lowell. "The Courting".

Payne. "Home Sweet Home.

Poe. "The Bells".

Riley. "Ike Walton's Prayer".

Smith. "America".

Whittier. "Mabel Martin".

Whittier. "Snowbound".

Whittier. "The Corn Song".

Whitman. "O Captain, my Captain".

Woodworth. "The Old Oaken Bucket".

Aside from the selections named in this list a great deal was read as outside or supplementary reading. As in the selections read in class or in immediate preparation of the lesson, these supplementary readings served either to impart information or to give an appreciation of the culture of the period in which they were written. Some of the longer of these outside readings were:

Cooper. "Leather Stocking Tales".

Cooper. "The Pilot".

Cooper. "The Spy".

"The Rose of Old St. Louis".

Dickens. "American Notes".

Hawthorne. "John Endicott".

Irving. "The Legend of Sleepy Hollow".

Irving. "Rip Van Winkle".

Selections from:

"Knickerbocker's History of New York".

Kennedy. "Horseshoe Robinson".

Longfellow. "Miles Standish".

Longfellow. "Evangeline".

Page. "Red Rock".

Palding. "The Dutchman's Fireside".

Stowe. "Uncle Tom's Cabin".

Stanley. "Order No. 11".

3. Writing:

A great deal of written work was required in the course of the year's work, (1) in the way of reports on special investigations, and (2) in making summaries or expositions of such solutions of the problems as had been found by the class. No work

was accepted which was not done with care. The criterion was neatness and legibility. When a composition did not meet these requirements, the faults were pointed out and,after the necessary instruction as to how to correct the difficulties, the paper was re-written. The corrections most frequent were for: mis-shaped letters, uneven letters, forgetting to dot "i", forgetting to cross "t","cramped hand" due to improper holding of the pen, and blotting due to taking too much ink. Cases of pure carelessness were few, and in the last half of the year very rare, on account of the certainty of having to re-write papers which were improperly done. The written work improved so much even from a purely mechanical standpoint as to receive favorable comment from every one who examined the compositions.

4. Spelling:

In all written work the number of words misspelled on each page was marked at the top of that page. The words were not indicated but left to be sought out by the child. This was to give care in looking over work previous to handing it in. These words when searched out, sometimes with the aid of a fellow-student, were written upon the back of the composition and handed to the teacher. A duplicate list was handed to the class secretary,who is elected every week, and he copied them in a notebook. After every misspelled word was written the initials of the pupil who had missed it. At the end of each week a spelling lesson was given upon the words missed. Words spelled incorrectly in this exercise were carried over until the next week. The system was thus self-corrective. At the end of the year the note book in which the records

were kept contained 639 different words, some of which had been misspelled very frequently. This does not represent the number, out of the total vocabulary used, that the children were unable to spell. Each child was taught to consult the dictionary for any word concerning the spelling of which he was in doubt. Many words, of course, which would otherwise have been misspelled, were from this reason spelled correctly. At the same time this list contains many simple words which were misspelled through a slip of the pen.

5. Grammar:

Attention to grammar arose from two sources, (1) in the interpretation of selections which were being read, and (2) in the correction of errors in written and oral composition. In the former case attention was directed to grammatical structure (1) when the meaning was not clear, or (2) when a closer analysis was helpful to a fuller appreciation of the selection.

A greater need for detailed grammatical study was found in the correction of oral and written compositions. Corrections were most frequent for: misuse of; pronouns, tense, auxiliary verbs, set and sit, lay and lie, as and like; confusion in the use of positive, comparative and superlative degrees, and in the use of adverbs for adjectives, and of adjectives for adverbs; for the use of the double negative.

Mistakes in grammar were indicated in written work by a checkmark at the margin of the line in which they occurred. The correct use was explained to the pupil making the mistake. When the mistakes were common to a considerable number ofthe class, time was taken in the recitation period for the correction of such mis-

takes. Two or three periods during the year were spent in organizing such knowledge as had been brought out in the correction of mistakes, but this work was discontinued for lack of time. For examples of this organization as begun, see appendix Nos. 4 and 5. Aside from the above instances no time was given to the study of grammar as such.

6. Composition and Language:

The content of the composition work has been already indicated. There was no fixed order in which the forms of discourse or qualities of style were taught. Each paper depended for its form and content upon the problem being studied at the time. Its treatment might require any one or all of the forms of discourse. If the paper were not intelligible, nor interesting, that fact was noted by the class if read to them or by the teacher if read by him. In reading papers the teacher indicated faults in the margin of the page on which they occurred, and discussed with the individual pupil the mistakes made by him. Whatever hindered the interest or clearness of a composition was corrected. Such corrections varied from punctuation to style. Where faults, as for example the lack of unity, were common to several pupils, time was taken in class for a correction of these faults. Considerable time was spent in discussing plans for composition, and there was gradually developed by the class the habit of carefully outlining a paper before writing it. Aside from such discussions as are described above, no time was given for instruction in anything like rhetoric.

As to the kind of work done in composition by the children see the papers in the appendix. These papers are identical in form

with the original papers written by the children. No attempt has been made to correct mistakes found in them or to change in any way the language of the pupils.

7. Arithmetic and Algebra:

In a solution of the problems which constituted the course of study described in Chapter IV, much arithmetrical work naturally arose. An example of how such work was done is given in the appendix; numbers 1, 2, 3, 6 and 8. All work in arithmetic was done only to aid in the solution of some problem concerning the development of the United States. [There] were [no] real problems except in cases when the pupil was unable to carry on the processes required. Usually such drill was needed by only part of the class. In such cases the other members of the class were free to continue their computations. Care was taken to see that the methods used were of the most economic kind. With the above exceptions every problem dealt with concrete material. Because of the estimates of large areas, populations, and wealth, many of the numbers used were very large. Care was taken to approach a relative understanding of such numbers by the use of graphic illustrations and by comparisons in percentage.

Legible figures were insisted upon. Problems not done neatly and legibly were not accepted.

Content; classified under the headings given in the ordinary textbooks in arithmetic, the following processes were used. It must be kept in mind that this list comprises only such computations as were found necessary to the solution of the problems outlined in Chapter IV. No attempt was made to force a correlation in order to insure proficiency in any arithmetrical process. Where

the demand for a process is not evident, some problem in the solution of which such a process was found necessary will be given below opposite the process. The list of processes used follows below:

1. Addition.

2. Multiplication.

3. Subtraction.

4. Division.

5. Common fractions with very small denominators such as one-half, one-third, one-fourth &c. Fractions which necessitated the use of large denominators were always expressed in decimal form.

6. Decimals. See appendix No. 6.

7. Percentage. See appendix No. 6.

8. Interest. Study of the national bank, economics of slavery &c.

9. Taxes.

   a. Tariff. Jackson's administration.

   b. Direct. Revolutionary war. Civil war. See appendix No. 3.

   c. Income tax. Civil War. See appendix No.3.

   d. Internal revenue. Spanish American war, Civil war.

10. Money. Foreign exchange.

   a. English. Estimates of colonial industries.

   b. French. Louisiana Purchase.

11. Ratio. Comparisons. See appendix Nos. 1 and 6.

12. Square measure. Public land policy. Railroad grants.

13. Cubical measure. Estimation of a ton as a measure of shipping capacity.

14. Linear measure.

15. Metric system. In weighing the cotton from which the class had picked the seed, in order to understand the importance ofthe cotton gin as an improvement over hand labor, only gram weights were available. These weights were then expressed in averdupois.

16. Profit and loss. Protective tariff.

17. Square root. In getting more perfect ideas of areas by comparing them as to lengths and breadths.

18. Longitude and time. Knowledge of the world in 1492. Magellan's trip around the world.

These topics did not receive an equal amount of interest. Some did not occur frequently enough to give exercise in their processes equal to that given in the ordinary course of study. This is true of: interest, cubical measure, square root, cube root, metric system, and common fractions with large denominator. On the other hand the four fundamental processes, decimals and percentage, were much more used than in the ordinary course of study. In the processes frequently used an unusual degree of speed and accuracy was developed.

8. Geography:

A serious attempt was made to keep the geographic background of American History constantly in the minds of the pupils by frequent questions (1) as to the location of places being discussed, and (2) as to the influence of physiography upon social, economic and political conditions. A great deal of map drawing was done to make these ideas, especially those of location, more exact.

The amount of subject matter studied in this constant reference to the physiography of the United States is too voluminous to be given in detail in this paper, Some idea of the subject matter and of the method has already been given in Chapters IV and V. The following outline will indicate the nature and scope of the subject matter which might be grouped under the title, The Geography of the United States and Its Possessions. Beneath each heading of the outline a number of historical problems will be given in the study of which the geographic subject matter under that heading was made use of.

1. Population, wealth, area.

   Territorial growth, growth in cities, growth in population, growth in industries, development of national resources, &c.

2. Physical features. Rivers, mountains,climate,coast &c.

   Explorations and settlements, building of canals, roads, railroads, growth of shipping, wars, irrigation, &c.

3. Natural resources.

   Growth in industries, development of natural resources, development of waterways, &c.

4. Dependencies. Location, people, resources, benefits to the United States.

   How we obtain foreign possessions, how to find a short route to the Pacific, territorial growth &c.

9. History and Civics:

A fairly adequate idea of the method and subject matter of the work in history has been given in Chapters IV and V. Had the scope of this paper permitted, all topics would have been given in the same detail as was topic 25. This would have given a better idea not only of the content of the year's work, but of the method as well. As such detail, however, was impracticable where so

many topics were given, the reader must keep in mind the social, economic and physiographic background to each problem as stated in the outline.

Charater study occupied much more time and was held to be of much more importance than is, or could be, indicated in Chapter IV. There was a serious effort to make each problem more real, by making it, wherever possible, the problem of the representative men and women of that period.

Many of the topics outlined in Chapter IV dealt primarily with governmental problems. This is true of topics 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 24, 26, 27, 28, 29, and 35, and particularly true of topics 10, 12, 14, 15, 16, 20, 26, and 35. In the study of these problems practically all of the material given in the ordinary textbook in civics was made use of. Since, however, this knowledge was acquired in connection with governmental problems as they have arisen in the history of this country, a much better idea of the actual workings and purposes of the government was obtained than could have been obtained from the study of an elementary textbook in civics alone. Much care was taken to create by the study of admirable characters on the one hand and of abhorent ones on the other a high standard of civic ideals.

10 and 11. Nature Study, Science and Physiology:

The experiments given in the outline of the problem, how the Confederate States were forced back into the Union, indicate the manner in which science, nature study and physiology were taught. Whenever a scientific principle or fact was needed in the solution of any problem, such a fact or principle was studied. Many experiments could not be performed on account of lack of laboratory

facilities. While frequent reference was made to such scientific topics as are classified as science, in Chapter I, only such topics can be given as received considerable study and laboratory methods.

Such topics were as follows:

1. Compass. The North star. A chart of the great dipper and the North star was made from observation by the children at home.

2. Study of the principles of the water-wheel and the water turban.

3. Study of the principle of the steam engine. An examination was made of a model of the steam engine in the engineering laboratory, University of Missouri. Telephone, telegraph.

4. Study of soils, reasons for cultivation, irrigation, fertilization.

5. Improvement of agriculture through: scientific knowledge, illustrations from plant and animal breeding. The museum of the horticultural building furnished subject matter for the study of plant breeding. The farm of the agricultural department furnished material for the study of animal breeding.

6. Farming implements and conveniences. Their improvement. Material for this study was obtained from the agricultural museum, University of Missouri.

7. Light. Reflection. Effect of sunlight as a sanitary agent.

8. Heat. Conduction. Radiation. Absorption. Modern Fuels. The thermometer.

The study of Physiology consisted almost entirely of the study of matters of hygiene. Such study arose from two sources, (1) in connection with the problems being discussed, and (2) in connection with the incidents of the school room.

12. Physical Training:

Physical training was entirely separate from the study of United States History.

13. Drawing:

Drawings were made of such objects as could be obtained which had connection with the problems outlined. The agricultural and horticultural museums, the engineering laboratory, and the state farm, furnished objects for such drawing. Some drawings were copied from illustrations. Work was done both with pen and ink and with water colors. There was some designing.

15. Manual Training and Domestic Science:

From the lack of equipment no work, aside from the making of Christmas presents, improvement of the school grounds, and the making of athletic apparatus, was done in manual training.

No laboratory work was done in Domextic Science.

16.17. The other subjects of the table on page 2, i.e. Latin, French, German, and Bookkeeping, were not included in the course of study.

CHAPTER VII.

Conclusion. Summary of Results.

The experiment described above was begun, it will be remembered, in the hope of finding some way of alleviating the faults of the curriculum, enumerated in Chapter II. To discover in what degree the curriculum of the experiment escaped these difficulties, there must be applied to it the criticisms applied in Chapter II, to the modern curriculum. The experimental curriculum must moreover be subjected to a further examination. In modifying the subject matter felt to be adequate to adult needs, to suit the nature of the child, and to make possible an economic school machinery, there is always a danger that this subject matter will be decreased in worth, i.e. that in the attention to method, the curriculum will be impoverished. The curriculum of the experiment will be examined, therefore, in the light of this possibility.

The first criticism made in Chapter II upon the modern curriculum was, that it is over crowded. The following instances were cited: (1) the time lost by purely mechanical change, (2) the time lost in getting the proper set of the mind for each new study begun, (3) the difficulty of carrying so many unrelated topics in the mind at once. The absence of any principle within the curriculum to remedy this crowding was pointed out. It is therefore proper to see what advantages in these respects the curriculum of the experiment offers.

1. Some loss from mere mechanical change is present in any system. Changes for recesses and for lunch occasion practically the same loss in all well administered schools. The loss of time caused by the change from one study to another seems at first thought, less in the experimental curriculum. And yet, when it is seen that music, physical training and opening exercises were not given as a part of this curriculum; and moreover, that new or subordinate problems were constantly coming up in each recitation, the gain in time, if there be any, appears very slight. To be sure, in so far as the teacher in the ordinary school attempts to give ideas gained in each study relation to life and to other studies, these same subordinate problems will occur, and this same loss of time. There is, however, a gain in time, arising from the fact that aside from opening and closing school there was no fixed schedule of time. This removed the waste so often arising from having to leave off a topic in the very midst of it, in order to fit the daily schedule of classes. However, the gain in time in making mere mechanical changes from lessening the number of recitations, and from the absence of a fixed daily program; was, it seems, offset by other losses arising from the informal nature of the work.

2. The time lost in getting the proper set of the mind for new ideas was much less than in modern public schools. It is easy to see why this should be so. Insofar as the method of the experiment was successfully applied, only such ideas

were presented each day as were needed in the solution of the problem of that day. These ideas were, therefore, more or less closely related to that problem.

Sometimes, it is true, the interest created in some topic, to which the solution of problem had caused attention, led the pupil so far astray that the return to the solution of the problem was made with some difficulty. This difficulty was less, however, than that resulting from the change from one subject to one wholly unrelated and was not of frequent occurrance. The interest in the main problem was usually sufficient to insure an easy return to its solution. Sometimes, too, in presenting the social, industrial, and cultural condition of the period as a background to a problem, the bearing of this background upon the problem was not entirely clear to the pupil. Here again some time was taken to get the right set of the mind.

3. Another criticism made in Chapter II, page 15, is, that the childrens' energies are divided among the many different lines of thought, represented by the studies, (from 10 to 19) of the curriculum. The course of study of the experiment, as can be seen by Chapters IV, V and VI probably embodied as many ideas, and from as many different fields. The difficulty of retaining an interest in all of these ideas, and of keeping clear the place, and the line of development of each, was, however, much less, because each

fact and principle found a place in a system. They were organized by their relation to the development of the United States.

Dewey's Criticism Applied:

In Chapter II, page 18, the following divergences between the child and the modern curriculum were stated.

"The narrow and personal world af the child against the impersonal, but infinitely extended world of space and time; second, the unity, the single, whole heartedness of the child's life, and the specializations and diversions of the curriculum; third, an abstract principle of logical classification and arrangement, and the practical and emotional bonds of child life."(1)

Applying these criticisms to the curriculum of the experiment, it will be seen that:

1. It is more personal. Dewey describes the world of the child as a "World of persons with their personal interests rather than a realm of facts and laws."(2) Little divergence can be pointed out between this world of the child and the curriculum of the experiment, for "while the realm of facts and laws" is embodied in that curriculum, it is this realm as interfering with, or as utilized in, the plans of people.

---

(1) Dewey. "Child and the Curriculum." p.11.
(2) Dewey. "Child and the Curriculum." p. 9.

2. It has more unity. This unity, insofar as the method was successfully applied, is of the kind which Dewey describes the world of the child to be, - "held together by the unity of the personal and social interests which his life carries along."(1) Sometimes through inability to apply the method consistently this unity was not present. This, however, was the fault of the teacher and not of the principle of organization.
3. The organization was practical. "Facts and laws" took their place in relation to some practical problem. This seems so self-evident from the nature of the curriculum as described that it will not be commented upon further.

The evils enumerated by Dewey,(2) as arising from these divergences tend to disappear in the curriculum of the experiment.

1. In so far as the method of the experiment was successfully followed, it was impossible that the child should get, not meaning, but mere words. The relation of white to heat absorption was not a mere statement to be remembered; the white cloth kept the water in the canteen cool. (See above, p.33.) The Appalachian Mountains were not a mere name, but were the barriers over which the people of the Ohio Valley could not, in early days, transport their products. The

---

(1) Dewey. "The Child and the Curriculum". p.9.
(2) Dewey. "The Child and the Curriculum". pp.30-38.

principles of Rhetoric, were formulated in the solution of actual problems of composition. In a similar way the reason for rules of grammar and of spelling, and the processes of arithmetic was seen because the need for such rules and processes had been already felt. The use of a thing insures that so far as its use extends, its meaning will be understood.

2. The experiment presupposes that literature and history, which picture the desires and actions of people are appreciated by children without external motivation, i.e. for themselves. It is for this characteristic of being felt worth while, for themselves, that these two studies are classed as Humanities. To be sure, the problems presented in the history and in the literature must be those for which the child's experience has fitted him. These two studies, as they are best taught in the curriculum today, rest on their own worth and are directly appreciated. When, however, care is taken to make the situations and the problems arising from them, <u>real</u>, by making them concrete, one has even more right to take it for granted, that pupils will be interested in them.

The other subjects in the curriculum, reading (oral exp) writing, spelling, etc. are primarily of a scientific nature, and therefore find their proper motive in being used as the means to reach some end. This use, as a means of control, characterized the method of their presentation throughout the year. There is no need here to repeat the descriptions of

the method followed in the various studies, as it has already been pointed out in Chapters IV, V and VI.

3. The third evil, the fact that in the simplification of the curriculum, the much prized logical organization is lost, is obliterated by the nature of the method followed in the experiment. The organization is primarily practical and logical. Subject matter was organized in a logical way, only after it had been known in its practical relations, and then only for the purpose of further control. For illustrations of the nature of some of this organization the reader is referred to the Appendix, Parts VII and VIII.

There was, however, little of this abstract, logical organizing done. In so far, therefore, as logical organization of the subjects of the curriculum is deemed necessary, the method of the experiment, is open to criticism. It seems, however, that most of the demands for logical organization come from high school teachers, particularly teachers of Latin, and Mathematics. Whether such demands are sufficient reason for a logical organization, to follow, after the practical organization, seems doubtful.

Summary: The author believes that the results of the experiment justify the following statements.

1. The crowded condition of the curriculum can be remedied by lessening the number of distinct studies, and therefore the number of recitations. This is not meant to imply that

the subject matter of any study, or the training in its processes is to be eliminated, except as a separate study.

2. The number of studies, as separated studies, could be lessened by teaching the following studies incidentally, i.e. as by-products of the study of problems of the nature of those described in Chapter IV.

(1) Reading (oral expression)
(2) Writing (penmanship)
(3) Spelling.
(4) Grammar
(5) Composition.
(6) Arithmetic
(7) Geography
(8) Nature Study.
(9) Physiology

The problems, in the solution of which these studies could be taught incidentally, are not confined to those of history and literature. Especially in the case of arithmetic, geography, physiology and nature study, these problems might be better found elsewhere, for example, in Manual schools, cooking, etc. There is less chance of waste, from unnecessary repetition, in the case of these studies, since they are taught only where needed.

3. That by thus teaching these studies according to their relation to the problems of life, and to each other, there will tend to be always, if these problems are made real to them,

1. A proper appreciative basis, and
2. Sufficient motivation.

4. That as is shown by Chapters V and VI the curriculum would not suffer in content by such a method.

In conclusion the author again wishes to call attention to the fact that the curriculum described above is not offered as a curriculum for the seventh, or eighth grades. Its whole purpose was to discover, if possible, some principles for removing the defects pointed out in Chapter II.

BIBLIOGRAPHY.

Bagley: The Educative Process.

Bales: Talks on the Teaching of Literature.

Talks on Writing English.

Bourne: The Teaching of History and Civics.

Carpenter; Baker and Scott: The Teaching of English.

Chubb: The Teaching of English.

Coursault: The Learning Process.

De Garmo: Herbart and the Herbartians.

Dewey: Child and Curriculum.

Educational Situation.

Ethical Principles Underlying Education.

Interest as Related to Will.

Hart and Channing: Guide to the Study of American History.

Mace: Method in History.

McMurry: Course of Study for the Eighth Grade.

Method of the Recitation.

Special Method in History.

Special Method in Geography.

Special Method in Language.

Special Method in Reading the English Classics.

Nature Study Lesson.

Parker: Talks on Pedagogics.

Smith: The Teaching of Elementary Mathematics.

Young: The Teaching of Mathamatics.

APPENDIX A.

In order to show more clearly the nature of the composition work done by the pupils, copies of some representative papers are given as an appendix. Extreme care has been taken to reproduce these compositions exactly as they were written by the pupils, in wording, punctuation, etc. No paper embodied in this appendix was written with the knowledge that it was to be embodied in this thesis. The aim in choosing these particular papers was to embody a representative list of compositions, and to include work of as varied a nature as possible. The list is as follows:

I. A Comparison of the North and South During the Civil War.

II. Union Losses During the Civil War.

III. The Cost of the Civil War.

IV. How the Confederate Constitution Differs from the Constitution of the United States.

V. The United States in 1790.

VI. Mrs. Dustin.

VII. Language.

VIII. Addition and Subtraction.

IX. The Story of the Revolution.

Appendix A. Part 1.

A Comparison Between the North and the South During the Civil War.

—

The period between 1860 and 1865 was called the "Fighting Age". It was called so, because the civil war broke out at that time in the United States.

In 1860 the North had about 22,100,000 people or about 4.2 times as many people as there were in the South at that time. The North had 5,000,000 fighting men while the South had only 1,400,000.

At this time the South had about 32.3% of the wealth of the country, amounting to about $5,202,166,107.

As for the navy, the North owned nearly every ship. The South did not have any manufacturing but the North did.

Before 1860 the South's chief product was cotton. But when the civil war broke out the cotton was worthless, for they could not sell it to anyone. The North blockaded the Southern seaport so that the South could not sell anything, and after a while the people would starve.

One great advantage to the South was that they could stay under cover of the forts. Except for this the North had nearly all the advantages of the civil war.

APPENDIX, Part II.

Union Losses During the Civil War.

Mary Margaret Shore.

The total number of men enlisted in the Union Army was 2,778,304 of these 2,213,363 men were individuals. The difference between these two numbers which is 564,941 represents the number of men re-enlisted.

The losses of the Union Army in men were 359,528. This is shown in the table below.

	Officers	Men	Total
Killed or died of wounds	6,378	103,795	110,174
Died of disease	2,712	197,008	199,720
Died in prison	83	24,783	24,866
Accidents	142	3,972	4,114
Drowned	106	4,838	4,944
Sun stroke	5	308	313
Murdered	37	483	520
Suicide	26	365	391
Military exec.	4	327	331
Unclassified	90	14,065	14,155
Total	9,584	349,944	359,528

The peculiar thing about the deaths was that most of the men died from diseases. 63 % of the

deaths were caused by diseases caused as shOwn below.

359,528) 225,290.000(.62 + = 63 %
215 7168
9 57320
7 19056
+

Of all the men 16 1/5 % were killed or died of diseases.

2,213,363) 359,528.000(.165 = 16 1/5
221 3363
137 92170
132 80178
5 119920
4 426726
+

It will be seen by the last problem that when a man enlisted he had one chance out of every six of being killed.

There were 2,213,363 men enlisted and 258,000 men killed or died so this shows that 1,853,835 men returned home.

APPENDIX, Part III.

The Cost of the Civil War.

Louise Babb.

The Civil War cost a great deal to the United States. The country spent in:-

1860 - 35,389,000
1861 - 431,813,000
1862 - 666,575,000
1863 - 776,096,000
1864 -1,153,307,000

making a total of $3,063,180,000.

It was a great problem to find out how to furnish this money. When the war began the country was $56,000,000 in debt.

First, the import taxes on tea, coffee and salt were increased. The custom receipts were:-

1860-1861, $ 39,000,000
1861-1862, 49,000,000
1862-1863, 69,000,000
1863,1864, 102,000,000
1864-1865, 85,000,000

making a total of $344,000,000.

But this did not pay more than one tenth of what was needed, so they had to resort to other devices. Taxes were laid on luxuries, such as fancy plate, carriages, yachts, etc. Excise duties were laid on liquor, tobacco, etc. Stamps were required on all legal documents and contracts. A tax was laid on incomes. If a man had an income of $1,000 and a tax of 3 % were laid on this it

would cost him $30. (Problem 1.) Taxes were laid on railroads and manufacturing companies. Congress issued $450,000,000 in greenbacks. They also borrowed $2,546,000,000 from foreign countries or from capitalists at home.

The soldiers' pensions cost a great deal also. These pensions are given to any soldier who was wounded during the war, so he could not work. If a soldier was killed a pension was granted to anyone dependent on him for support. The pensions amount to $8 for privates and larger amounts for the officers according to their rank. The pensions paid out by the government on account of the Civil War have amounted to $3,259,195,306.60. The cost for the war itself was $6,189,929,908. This made the whole cost of the war amount to $9,449,125,214.60. (Problem 2.) It would have paid to have bought the negroes instead of having a war about it, for this would have allowed $2,389.90 to have been paid for each negro, since there were 3,953,760 slaves in the country. (Problem 3)

But this did not represent the whole cost of the war. A great deal of property was destroyed shipping, buildings, railroads and crops. There was also a great loss in the uncultivated farms, and besides this was the loss of the slaves in the South.

APPENDIX, Part IV.

How the Confederate Constitution Differs From The Constitution of the United States.

Bredelle Jesse.

The Constitution of the Confederate States was made in 1861. It was very much like the Constitution of the United States and in many places it was precisely the same. The wording was not always the same, but the meaning was about the same.

The Constitution of the Confederate States differs from the Constitution of the United States in the following ways:-

The states could retain their soverign power.

The cabinet had a right to have a seat in either house.

No duties could be laid to help any industry.

Congress could not vote money for internal improvements.

No law interfering with the right of property could be passed.

Foreign slave trade was prohibited.

People could move their slaves anywhere within the Confederate States.

The President could remove any man from office.

Amendments requested by three states could be

made if two thirds of the states voted for them.

The Constitution of the United States says in Art.4, Section 2, clause 3, that a person could not take slaves into territories. The Confederate Constitution says a person can.

The President was to have 6 years in office and could not be re-elected.

The post office had to pay its own way after 1863.

APPENDIX A. Part V.

The following represents a composite composition written by the class working in a group. Each offered a sentence to begin. The best was chosen by the class. The rest of the sentences were written in a similar way.

THE UNITED STATES IN 1790.

Under the Treaty of Peace the boundary of the United States was on the North about the same as now, running west to the Mississippi River down to the thirty-first parallel and followering this eastward to the Atlantic Ocean. This seems rather small beside the present United States as it is but twenty-seven percent of the present area, even exclusive of Alaska and the Philipines. But it was not as small as it seems, for it was larger than the combined area of France, Germany, Spain, Belgium, Switzerland, Greece, Denmark, and Great Britian. This area is very rich in its resources. It's harbors are as good as could be found anywhere, and are very numerous. It's coal mines are amoung the richest in the world. This fact added abundance of water power makes an important industry of manufacturing. The Ohio Valley is one of the most fertile agricultural districts in the world. It is no wonder then that the population of this area has grown so that it now contains seventy percent of the whole population of the United States.

APPENDIX, Part VI.

Mrs. Dustin.

Joy Magill.

The following is a sample of the narrations prepared by individual pupils to be read to the rest of the class. Some of these were quite long.

Early in the spring the Indian fell upon some farms. One of these farms was the Dustin farm. Mrs. Dustin was sick in bed having had a baby a few weeks before. Mr. Dustin was out in the forest with his seven children, the youngest two years old. When he heard the women scream he told the children to run to the fort, took up his gun, mounted one of the work horses and set off to the house. He was too late. The house was already in flames and his wife and her nurse gone. He ran back to his children and got them to the fort fighting off the Indians all the time.

One day Mrs. Dustin was seen coming with a boy, the nurse,and ten Indian scalps. Then she told her story as follows, "That morning when they took the nurse and myself they dashed the babys head against the tree and we were dragged into the forest and there I saw one of our neighbors. We were divided among the Indians and the boy, the nurse and myself were together. We were in the

care of two warriors, three squaws and seven children. Then we all started north, two hundred and fifty miles. All the while we were going the nurse and myself prayed and counted our beads. Then the Indians to amuse themselves told us how we would be beaten when we reached their town. When we reached the middle of the forest I had planned our escape. One night when they all lay down to sleep I and the boy and nurse took tomahawks, stood over them and killed ten of them. One squaw ran howling into the forest and home." Mrs. Dustin was always called an Amazon woman on account of being so brave.

APPENDIX, Part VII.

Language.

Louise Babb.

The following composition illustrates how some of the work in grammar was organized. As stated in Chapter VI, this work of organization was discontinued for lack of time.

Language is to express people's thoughts. When we express a single thought we usually call them sentences.

All sentences are not alike. When the thoughts are more detailed the sentences are longer. Most people think differently from other people, and thus express their thoughts differently, such as a baby and an old person, a Frenchman and an Englishman, etc. The same person thinks in many different ways. He may want to know something, saying, "Is he going?" This kind of a sentence is called an interrogative sentence. When he gets very excited what he says is called an exclamatory sentence, such as "O, what a beautiful day it is! " When he wishes to state a fact what he says is called a declarative sentence, such as, "The Americans were victorious at Saratogo." When he gives a command or makes a request, what he says is called an imperative sentence, such as, "Please shut the door."

Appen. Part VII.

There are two parts to a sentence, the subject and predicate. The subject is what you are talking about. The predicate is what you say about the subject. In, "The boy went to town", "the boy" is the subject, and "went to town" is the predicate.

There can be more than one subject or predicate in a sentence, such as in, "The calves and colts run and play." In this sentence "the calves and colts" is the subject and "run and play" is the predicate. This sort of a subject or predicate is called compound.

APPENDIX, Part VIII.

Addition.

Mary Margaret Shore.

In adding place the numbers one below the other, so that units will be under units, tens under tens, etc.

It is very important that the numbers be placed in a straight column, because if not, units, tens and hundreds will become mixed.

Next draw a line under the column of figures, so as to separate the figures from the result. This result is called the sum.

For example in 1820 there were in the United States 7,862,166 whites, 233,634 free negroes, and 1,538,022 slaves. To find the total population place the numbers as has been shown above, like this:

7,862,166 whites.
  233,634 free negroes.
1,538,022 slaves.

sum.

The unit column should be added first, the sum of this column is equal to 12. In writing numbers you can't have more than 9 units in units place. 12 units are equal to 2 units and 1 ten, so that you must place the 2 under units, and the 1 above or below the tens column.

This placing of the 1 on the tens column is called carrying. In a like manner when any column amount to

ten or more, they are carried to their own column. All numbers are carried, except units, to the left column. This process is continued until all the columns are added.

The numbers can either be added from the bottom to top or top to bottom.

To check or prove problems you may add both ways. If you have a long problem, divide it up into smaller ones, then add the results.

Appen. Part VIII.

Subtraction.

Louise Babb.

Sometimes we want to find the difference between two numbers. This process is called subtraction. The numbers are arranged in the same way as in addition usual ly with the larger number at the top. Then find the difference in each column beginning at the units column and going toward the left. Sometimes the number being subtracted from in a column is smaller than the one being subtracted. In this case you borrow one from the next column to the left. This one would be equal to ten in the column being subtracted. In arithmetic the number being subtracted from is called the minuend. The number being subtracted is the subtrahend, and the difference is called the remainder.

For example, in 1820 there were 42,450 negroes in Alabama, 571 of which were free. To find how many were slave you would go about it in the following way:

$$\begin{array}{r} 42{,}450 \\ 571 \\ \hline 41{,}879. \end{array}$$

APPENDIX, Part IX.

The following paper was written without the aid of any paper or book, in a test upon the Revolutionary War. Note the organization resulting from teaching the war in problem form.

The Story of the Revolution.

Louise Babb.

The first fighting of the Revolution was done around Boston, at Lexington and Concord in which the British were badly defeated. Soon after, the Battle of Bunker Hill was fought in which, although the Americans were driven from the field, their loss was much less than that of the British. The British were finally driven out of Boston by the Americans, who held Dorchester Heights, which commanded the town.

While this campaign was going on, the Americans invaded Canada and succeeded at Montreal while they were defeated at Quebec, so this invasion was a failure.

The British formed a new plan for conquering the colonies. They wanted to capture New York, so that the South would be separated from the North, making the colonies weaker. They decided to get control of the Hudson. This they did in the battles of Long Island and White Plains. After this Washington started across New Jersey toward Philadelphia. On this journey he won the battles of Trenton and

Princeton. These victories helped to secure aid from France.

The British then formed a new plan for capturing New York. Howe was to start at the mouth of the Hudson and meet Burgoyne who was to come down the Hudson by way of Lake Champlain. St. Leger was to go down the Mohawk, collect troops and meet Burgoyne near Albany. But he became frightened and returned to Canada. Howe failed to receive his orders, so started towards Philadelphia, which he took after winning two very doubtful victories at Brandywine and Germantown. Burgoyne started down the Hudson and captured several forts. He ran out of provisions and sent some Hessian troops to Bennington for more. These troops were all captured and Burgoyne was forced to surrender at Saratoga.

The British then decided to begin at the south, capturing one at a time until they were all captured. They captured Savannah, Augusta and Charlestown. They also defeated the Americans at Camden. Washington sent General Greene to the south to check the British. He defeated the British at several battles and Cornwallis retreated to Yorktown, hoping to join Arnold. Washington heard that he was there, and, by a sudden movement started from New York, where he had been keeping Clinton penned up, toward Philadelphia, where there was great rejoicing when they found he was going to Yorktown. The French fleet cut off the

escape of Cornwallis by sea and the American and French troops by land. The siege lasted four weeks. The British saw that they must surrender or starve. Cornwallis chose the former. He was so ashamed that he would not take his sword to Washington and sent one of his generals to take it. Washington appointed General Lincoln to receive it. The surrender of Yorktown ended the war.

APPENDIX B.

The purpose of this section is to give a better idea of the appearance of papers as they were written by the pupil, and to offer specimens of the penmanship of some of the members of the class. No paper was written with the knowledge that it was to be embodied in this thesis. In fact, the addition of this section was determined upon after school had been closed, so that it was with difficulty that specimens of the work of the five individuals were obtained. Two of these five individuals were above the average of the class both in penmanshup and in composition. The other three individuals were average members of the class.

The list is as follows:

Louise Babb

Territorial Growth of the United States.

The first territory that was added to the United States was the Louisiana Purchase, bought in 1803. This was not due to desire for more land. When Louisiana was ceded by Spain to France the right of deposit was taken away from the Westerners and in order to get this the United States had to buy all of Louisiana instead of the Orleans territory which they had intended to buy. It was thought at first that the territory extended to the Pacific coast, including 1,171,000 square miles, but they afterwards found that it extended only to the Rocky Mountains, including all of North and South Dakota, Louisiana, Arkansas, Missouri, Iowa, Nebraska, Montana and parts of Wyoming, Colorado, Kansas, Oklahoma and Minnesota. This was 883,072 square miles. The United States paid $15,000,000. for it.

The next annexation of territory was the annexation of Florida

Louise Babb.

Territorial Growth of the United States.

In 1819. This territory had always caused the United States a great deal of trouble, because there were a great pirates, robbers and run-away slaves, who joined the Seminole Indians in robbing and murdering the people of Southern Georgia. The government paid $5,000,000. for it. It contained 58,680 square miles. At the same time the United States and Spain agreed upon a boundary between Louisiana and the territory claimed by Spain. This boundary began at the mouth of the Sabine River, following it to the parallel 32½ and from there north to the Red River, following that to the 100th meridian, then north to the Arkansas River, following it to its source, then north to parallel 42½ and due west to the Pacific Ocean.

In 1836 Texas seceded from Mexico, because Mexico had abolished slavery. In 1844 Texas asked for admission into the Union but was

Louise Babb.

Territorial Growth of the United States.

not addmitted intil 1845. This brough on war with Mexico. In the treaty of peace we agreed to pay Mexico $18250,000,, and secured Texas and the territory claimed by Mexico, including parts of new Mexico, Arizona, Colorado, Wyoming and all of Utah, Nevada and California. This treaty was made in 1848. We secured 522,568 square miles.

In 1846 we secured Oregon by a treaty with England. It contained 288,928 square miles.

In 1853 we purchased a strip of land, containing 45,535 square miles. This is now the South ern part of Arizona and New Mexico. It was known as the Gadsen Purchase. We paid Mexico $10,000,000. for it.

In 1867 we bought Alaska from Russia for $7,200,000. It contained 577,390 square miles.

In 1899 we bought Guam, Ports Rico and the Phillipines for $20,000,000. This was 118,142 square miles.

Territorial Growth of the United States.

Some Americans went to the Hawaiian Islands and set up a government there. They then offered themselves to the United States, which offer was accepted in 1900. The area of these islands was 6,449 square miles.

By a treaty with England and Germany we secured the island of Samoa. It contained 80 square miles.

The United has a great deal of influence over Cuba.

By all the annexations we secured 2,875,844 square miles. The total cost was $70,450,000.

It may be seen by this that the United States has grown from a small nation to an empire.

The Negro in America.

The negro problem is one of great importance to the people of the United States. This is due to several reasons. The first is shiftlessness, the second ignorance, and the third criminality.

The negro is shiftless because when he was among the wild tribes of Africa there was no one to teach him and consequently he did just like his forefathers did. The hot climate of Africa might be a reason for his laziness. He never was taught to build houses but he would build a rude hut to live in. When the negro was brought to America as a slave he was educated a little more but he did not work any more than he had to. Later on when the negroes were freed there were many organizations formed to help them. One was the Freedman's Bureau which would give each negro 40 acres of land and a mule. The negro is not generally trusted. Many of them steal and gamble away their money and spend it for liquor.

The Negro in America.

Kealing, a negro writer, said in one of his works that a negro would eat fat bacon for a week to get a soda-water at the end of that time.

The negro is ignorant because when he was in Africa his parents were uneducated and naturally he did not get much of an education. The Southerners made many laws against educating the negro. In 1900 44.6% of the negroes of the United States were illiterate.

The negro is always more criminal than the white man is. In the South, out of every 10,000 white people 6 are criminal, and out of every 10,000. negroes 29 are criminal. In the North 12 out of every 10,000 white people are criminal, and 69 out of every 10,000 negros are criminal. One of the most common negro crimes is stealing, but sometimes even worse crimes are committed, and consequently their children learn their ways. The negro criminality is due to the fact that when they were in slavery they did not think it was

The Negro in America.

any harm to steal what they could from their master, and so they could not get rid of the habit.

The negro problem is made still greater because the negro population is concentrated. There are negroes in the East, the West, and the north, but the great majority of them are in the South. The negro population of the former Confederate States and the United States will be shown in the following tables :—

The negro population in the states of the former Confederacy.

Va.	660, 722.
N.C.	624, 469.
S.C.	782, 321.
Ga.	1, 034, 813.
Fla.	230, 730.
Ala.	827, 307.
Miss	907, 630.

The negro population in the divisions of the United States.

N. Atlantic	385, 020.
S. Atlantic	3, 729, 017.
N. Central	495, 751
S. Central	4, 157, 099
W. Division	30, 254
Ind. Ter.	36, 853
Total	8, 833, 994

The Negro in America.

La	650, 804.	Men working on	Total = 8,833,994
Ark	366, 856.	war ships =	6,394
Texas	620, 722.	Total living on land =	8, 827, 600.
Tenn	480,243.		
Total	7, 186, 617.		

The following problem shows the % of negroes that lived in what were the seceded states:—

8,827,600) 7186617.000 ⌊ .814 = 81.4 %.

70620800

12453700

8827600

36,261,000

35,310,400

950,600

81.4 % of the negroes live in what were the seceded states.

Bredelle Jesse

The Negro in America.

The % of negroes in some cities of the United States will be shown in the following table:—

48.8 % of	Memphis	are	negroes
31.1 % of	Washington	"	"
27.1 % of	New Orleans	"	"
19.1 % of	Louisville	"	"
15.6 % of	Baltimore	"	"
6.2 % of	St. Louis	"	"
4. % of	Philadelphia	"	"
10. % of	Kansas City	"	"
57 % of	Jacksonville	"	"
56 % of	Charleston	"	"
51.8 % of	Savannah	"	"
30. % of	Columbia, Mo.	"	"

The % of negroes in each state will be shown in the following problems:—

North Atlantic Division

20,661,675. whites
385,020. negroes
21,046,695.

1.82% of N.A.D. ∴ are negroes.

21,046,695) 385020.0000 (.0182 = 1.82%
21046695
174553,050
168,373,560
61794900
42093390
19701510

Bredelle Jost

The Negro in America.

South Atlantic Division.

Delaware.

154,038
30,697
184,635

184,635) 30697.000 (.160 = 16.0%
184635
1,123,350
1,107,810
15,540

16.0% of Del. are negroes.

Maryland.

952,980
235,064
1188,044

1,188,044) 235064.000 (.197 = 19.7%
1188044
11,625,960
10,692,396
9,336,640
8316308
1,020,332

19.7% of Md. are negroes.

District of Columbia.

192,016
86,702
278,718

278,718) 86702.000 (.311 = 31.1%
836154
306,660
278,718
299,420
278,718
20,702

31.1% of D. of C. are negroes.

Virginia

1,193,462
660,722
1,854,184

1,854,184) 660722.000 (.356 = 35.6%
556255 2
10,446,680
9270,920
11757600
11125104
632,496

35.6% of Va. are negroes.

The Negro in America

West Virginia

915,301
43,499
958,800

958,800) 43499.000 (.045 = 4.5%
3835200
5,147,000
4,795,000
352,000

4.5% of W. Va. are negroes.

North Carolina.

1,269,241
624,469
1,893,710

1,893,710) 624469.000 (.329 = 32.9%
5681130
5635600
3787420
18481800
17043390
1,438,410

32.9% of N.C. are negroes.

South Carolina.

557,995
782,321
1340,316

1,340,316) 782321.000 (.584 = 58.4%
6701580
11,216,300
10,722,528
4937720
4020948
916872

58.4% of S.C. are negroes.

The Negro in America.

Georgia
1,181,518
1,034,813
2,216,331

2,216,331) 1034813.000 (.467 = 46.7%
8,865,324
14828060
13297986
15300840
13297986
2,002,854

46.7% of Ga. are negroes

Florida
297,812
230,720
528,532

528,532) 230720.000 (.436 = 43.6%
2114128
1930720
1585396
3451240
2171192
280,048

43.6% of Fla. are negroes.

North Central Division

Ohio.
4,060,644
96,901
4156545

4,156,545) 96901.000 (.023 = 2.3%
831390
13,770,100
12,469,635
1,300,465

2.3% of Ohio are negroes.

Indiana
2,458,957
57,505
2516,462

2,516,462) 5775005.000 (.022 = 2.2%
5032924
7175760
5032924
2,142,836

2.2% of Ohio are negroes.

The Negro in America.

Illinois

4,736,472
85,078
4,821,550

4,821,550) 85078.000 (.017 = 1.7%
48215 50
36,862,500
33,750,850
3,111,650

1.7% of Ill. are negroes.

Michigan

2405 166
15 816
2420 982

2,420,982) 15816.000 (.006 = .6%
14525 892
1,290,108

.6% of Mich. are negroes.

Wisconsin

2066 500.
25 42.
2069 042.

2069042) 2542.000 (.001 = .1%
2069 042
472,958

.1% of Wis. are negroes

Minnesota

1746 435
4,959
1,751,394

1,751,394) 4959.000 (.002 = .2%
3503 788
1455 212

.2% of Minn. are negroes.

Iowa

2,219,160
12,693
2,231,853

2231853) 12693.000 (.005+ = .6%
11159265
1533735

.6% of Iowa are negroes

The Negro in America

Mo.

2,945,431
161,234
3,106,665

3,106,665) 161234.000 (.051 = 5.1%
15533325
5901750
3106665
2795085

North Dakota.

318,360.
286.
318646.

318,646) 286.0000 (.0008+ = .08%+ = .09%
2549168
310,832 .09% of N.D. are negroes

South Dakota

401,105
465
401,570

401570) 465.000 (.001 = .1%
401570
63430 .1% of S.D. are negroes

Nebraska

1060031
6269
1066300

1,066,300) 6269.000 (.005 = .5%
5331500
937500 .5% of Neb. are negroes

Kansas

1418492
52003
1470,495

1470495) 52003.000 (.035 = 3.5%
4411485
7888150
7352475
635675 3.5% of Kan. are negroes.

The Negro in America.

Kentucky

1,862,468
284,706
2,147,174

2,147,174) 284706.000 (.132 = 13.2%
214 7174
6,998,860
6441522
5573380
4294348
1279032

13.2% of Ken. are negroes.

Tennessee

1,540,373
480,243
2,020,616

2,020,616) 480243.000 (.237 = 23.7%
4041232
7611980
6061848
15501320
14144312
1357008

23.7% of Tenn. are negroes.

Alabama.

1,001,390
827,307
1828697

1828697) 827307.000 (.452 = 45.2%
7314788
9582820
9143485
4393350
3657394
735956

45.2% of Ala. are negroes.

The Negro in America.

Mississippi.

643640
907630
1551270

1551270) 907630.000 (.454 = 45.4%
7756350
13199500
12410160
789340
775635
13705

Louisiana

730,821
650,804
1381625

1381625) 650804.000 (.471 = 47.1%
552650
981540
967137
1440250
1381625
48625

47.1% of La. are negroes

Texas.

2,427,988.
620,722.
3,048,710

3048710) 620722.000 (.203 = 20.3%
6097420
10980000
9146130
1833870

20.3% of Texas are negroes.

Oklahoma

734707
55684
790,401

790401) 55684.000 (.070+ = 7.1%
5532807
355930

Bredell Jones

The Negro in America

Arkansas

944,708
366,856
1,311,564

1311564) 366.856.00 (.28 = 28.%
2623128
10454320
9180948
1273,372.

28.% of Ark. are negroes

Western Division

4,061,095
30,254
4,091,349

4091349) 30254.000 (.007 = .7%
28639443
1614557

.7% of W.D. are negroes

The negro is not as big a problem as many people have supposed, for he is constantly becoming a smaller proportion of the population of the United States. This will be shown by decades in the following problems :—

1790.

3,172,006.
757 208
3,929,214

3929214) 75.7208.000 (.193 = 19.3%
3992214
36428660
35362926
1065734

In 1790 19.3% of the U.S. were negroes

Bredella Jose

The Negro in America.

1850

19,553,068
3,638,808
23,191,876

23,191,876) 3638808.000 (.156+ =
23191876
131962040 15.7%
115959380 In 1850 15.7%
160026600
139151256 of U.S. were
20,875,344 negroes.

1860

27,001,491
4,441,830
31443321

31,443,321) 4441830.000 (.141 = 14.1%
31443321
129749790 In 1860,
125773284 14.1% of U.S.
39765060 were negroes
31,443,321
8,321,739

1870*

33,678,362
4,880,009
38,558,371

38,558371) 4880009.000 (.126 = 12.6%
38558371
102417190 In 1870 12.6%
77116742 of U.S. were
253,004480 negroes
231,350226
21,654,254

1880

43,574,990
6580,793
50,155,783

50,155,783) 6580793.000 (.131 = 13.1%
50155783
156,521,470 In 1880 13.1%
150,467,349 of U.S. were
60,541,210 negroes.
50,155,783
10,385,427

note. The censuses of 1870 was not exactly correct.

The Negro in America.

1800.

4306 446
1 002 037
5 308 483

5308483 / 10,020,37.00 (.18+ = 18.%
5308483
47,118,870
42,467,864
4,651,006

In 1800 18.% of U.S. were negroes

1810

5862073
1377808
7239881

7239881 / 1377808.00 (.19 = 19%
7239881
65381090
65158929
222161

In 1810 19.% of U.S. were negroes

1820

7866797
1771656
9638453

9638453 / 1771656.000 (.183 = 18.3%
9638453
80781070
77107624
3673446
2891535
781,101

In 1820 18.3% of U.S. were negroes.

1830

10,537,378
2 328 642
12,866,020

12866,020 / 2 328 642.000 (.180+=18.1%
12866020
104,204,000
102 928 160
12,758,400

In 1830 18.1% of U.S. were negroes

1840

14,195,805
2,873,648
17,069,453

17,069,453 / 2873 648.000 (.168 = 16.8%
17069453
116,670,270
102,416,718
142,535,520
136,555,624
5 879.896

In 1840 16.8% of U.S. were negroes.

Bredelle Jesse.

The Negro in America

1890

55,152,210
7,470,040
62,622,250

62,622,250) 74700 40.000 (.119 = 11.9%
62 622 250
120,781,500
62,622,250
581,592,500
563,400,250
18,192,250

In 1890, 11.9% of U.S. were negroes.

1900

66,890,199
8,803,535
75,693,734

75693734) 880353500 (.116 = 11.6%
75693734
133416160
75693734
477224260
464162404
13,061,856

Although the negro is increasing he is not increasing nearly as rapidly as the white man is. This will be proved in the following problems—

	Negroes.
1900 - - -	8,803,535.
1880 - - -	6,580,793.
	2,212,742

The Negro in America.

6,580,793) 22127 42.000 (.336 = 33.6%
19742379

23850410
19742379
41080310
39484758
1,595,552

From 1880-1900 the population of the negroes increased 33.7%

Whites.

Pop. of whites in 1900. was 66,890,199.
" " " " 1880 " 43,574,990.
23,315,209.

43,574,990) 233152090.00 (.53 = 53.%
217749500

153,771,400
130724970
23,046,430

From 1880.-1900. the population of the whites increased 53%.

The negro is gradually becoming more educated, for in 1863, 95% of the negroes of the United States were illiterate, in 1880, 70%, and in 1890 only 56.8% were illiterate.