

BELLEVILLE

Public Schools

SECOND ANNUAL REPORT

FOR THE

School Year Ending July 2, 1875,

AND

2

**VARIOUS SUPPLEMENTARY DOCUMENTS EXHIBIT-
ING THE CONDITIONS OF THE SCHOOLS.**

Printed by order of the Board.

BELLEVILLE, ILL.,

**"SPERN DES WESTENS" STEAM-PRINTING ESTABLISHMENT,
1875.**

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V. 2
Board of Education.

1875-6.

OFFICERS :

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Secretary ex off. . . . **HENRY RAAB.**
Superintendent, . . . **HENRY RAAB.**

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TERM EXPIRES APRIL 1876.

HENRY BRUA. **THEO. J. KRAFFT.**
TERM EXPIRES APRIL 1877.

HENRY A. KIRCHER. . . . **WILLIAM MAUS.**
TERM EXPIRES APRIL 1878.

Time of Meetings.

On the 15th and last of every month. If any of these days falls on Sunday, the meeting is held the preceding Saturday.

School Houses.

Franklin Schoolhouse. Corner Franklin & Richland Streets, contains 18 rooms.

Washington Schoolhouse. Corner 5th South & Abend Streets, contains 10 rooms.

One school kept in South-Belleville Engine House.

West-Belleville Schoolhouse. On Silver Street, contains 6 rooms.

Lincoln School, in African Methodist Church, on 3d North Street, one room.

Superintendent's Report.

TO THE BOARD OF EDUCATION. DIST. 4, T. 1 N. R. 8 W.

Gentlemen :

According to the regulations of your Honorable Body I have the honor to submit my Second Annual Report of the condition of the Public Schools under your charge. The past school-year, which was one of unusual progress and efficiency, presents many features and accomplishments upon which the people have good reasons to congratulate themselves. To enable you the better to judge of the labors of teachers and pupils and the advantages and defects of our system; I shall present the several topics separated from one another.

I. STATISTICS.

The reopening of the schools in September last showed in the Eighth Grade alone an increase of 60 children over the enrollment of the previous year. This unlooked for increase—giving proof of the growing popularity of our schools—necessitated the establishment of two new schools of that grade, one of which was located at West-Belleville, where most fortunately we had an unoccupied room for this purpose ; at the Washington Schoolhouse, however, where all rooms were filled to the utmost of their capacity, a suitable locality had to be rented. After a good deal of search the upper story of the South-Belleville Engine House was secured. The opening of this school afforded the citizens in the southern part of the district an opportunity of seeing their very small children housed in a school not too remote from their residences. As we may expect a

continuous increase, I would recommend — as soon as they become a necessity — the establishment of schools of the Eighth Grade in rented rooms all over the City, until the attendance becomes so great as to render the erection of another building unavoidable.

At the beginning of the second term in February the attendance had again so increased that a third new school of the First Grade was created, thus enabling pupils who had completed the Grammar Course, to push their education still further and inducing them to stay at school one year longer. The teaching force was augmented to 39 teachers over 36 employed during the previous year. It is the general complaint of superintendents all over the country that pupils do not attend school long enough and that consequently the education of our people is not sufficiently thorough. The proportion in our schools is as follows: Taking the number that enters at the age of six years as the basis, we find that 40 per cent. of them fall off at the end of the fourth school-year; that 20 per cent. fall off at the end of the fifth school-year and that only 12 per cent. of the number that enters at the age of 6 years finish the entire course. This statement you will find corroborated by an inspection of Table No. IV. appended to this Report. Even for the normally developed child it is impossible within four years to acquire more than the ability to read and write and to perform the simplest processes in calculation. Yet the ease with which children of the tender age of 10 years can be made to contribute to the comfort of the family will for many years to come prevent the acquisition of a more thorough intellectual culture.

Notwithstanding the long and severe winter and the consequent prevalence of disease, the average daily attendance of the past year was more than one per cent. greater than the year before; in 1873—4 it was 89.8, and in 1874—5 91 per cent. This will only under very favorable circumstances and in very favorable years be excelled. Still, some parents keep their children out of

school half days, days or even weeks for the most trivial causes, retarding not only their own children's, but also the progress of those pupils who attend regularly. For the first time, during the year, the number of tardinesses and of perfect attendance has been recorded; the tardinesses during the year amounting to 3668 cases, the average perfect attendance considered by months, being 36 per cent. on the number enrolled. If we consider how great a virtue punctuality is, I think we ought to employ all possible means to bring it about. Of course, we have rules and penalties for the violation of the rules, yet I find that in the schools where the least number of suspensions for irregularity occurs, the regularity and punctuality are greatest, while, on the other hand, frequent suspensions do not insure them. It is evident therefrom, that the earnest devotion of the teacher to his task and the example he sets do more to promote regularity and punctuality than all the penalties imposed. As an incentive to insure regularity and punctuality I would recommend the publication of the names of such pupils who during the whole year have neither been absent nor tardy; such a "roll of honor" would certainly appeal to higher motives in the pupils and prove more efficient than suspensions from school and other punishments.

The average number of pupils taught by one teacher was 46 on the number enrolled, and 44 on the average number belonging; if the instruction is not to become mechanical and superficial, this number should only in very rare cases be increased. If during the first four schoolyears the teacher has a greater number to instruct, he cannot sufficiently individualize and do justice to all, nor can accuracy and neatness of work be sufficiently insisted upon. In the higher grades, if the teacher has charge of a greater number, the inspection of the written work will absorb too much of the time he needs for preparation and recreation. The latter especially, for in no calling is there so great a strain upon the nerves of the individual as upon those of the

conscientious teacher, and it would be suicidal policy to overwork him who is to exercise such a control upon the destiny of the race and the fate of the Commonwealth. There are in a teacher's life enough cares and vicissitudes which give him his share of nervous excitement and irritation, as not to grant him the necessary time for repairing the absorbed mental energies. Furthermore, if the proper sanitary rules are to be observed — Dr. Bell, an authority in school hygiene, demands 300 cubic feet of space and 15 square feet of floor for each child — we cannot accommodate even such a number as above given in our rooms, the most convenient of which afford only 227 cubic feet of space per pupil.

II. SANITARY REGULATIONS.

Pure air and enough of it should be our constant aim in our school accommodations. For if we educate the intellect and permit the health of our pupils to be impaired, certainly, we shall not perform our duty to the rising generation. The children of to day will be tomorrow's men and women to whom is to be entrusted the welfare of society; and if they shall maintain our free institutions, they must beside the proper mental culture possess the physical strength to execute the dictates of the mind and perform the duties of life.

It must be our constant care to improve the cleanliness of our school-houses and the surrounding grounds, so that even the most fastidious parents need not fear to send their children thither. Any measure that tends to promote cleanliness and proper ventilation should receive the prompt attention of the teachers. The health of the pupils committed to our care is also endangered by the overheating of the rooms; imperceptibly the temperature of the room rises to a high degree, then the windows are raised and a stream of cold air is made to pass over the body of the pupils, causing colds and all the diseases which are their consequences. The teacher should therefore always watch the thermometer and

never permit the temperature of the room to rise above 70 degrees. One or two windows on that side of the room whence the wind does not come, should be raised to give egress to the foul air. At recess and at the close of school, when the pupils are dismissed, all the windows should be raised to renew the air. During the good season of the year, from May till October, it is comparatively easy to keep the rooms well ventilated, but during the winter, the ingenuity of the teachers is severely taxed to devise means for this end. Especially the past winter, the intensity and long duration of which will be long remembered, tested our regulations; the average daily attendance, which during that time was constantly 91 per cent. proves that our regulations were efficient in preventing sickness of the pupils. Although the third story of the Franklin Building was heated by stoves, the furnaces could on one or two very cold days not supply the necessary warmth, and two classes had on this account to be dismissed. For the coming season I would, if the heating by furnace proves insufficient, recommend the setting up of stoves in these rooms.

III. DISCIPLINE.

Paramount, if not superior, to the acquisition of knowledge at school, is the acquisition of proper discipline. What proper school discipline is will become evident from an extract from a paper on that subject by an able and experienced educator. Says Dr. Douai :

“In general and in particular the discipline may differ — every teacher has his own way of governing his school — yet there are essentially but two kinds, the *mechanical* and the *organic* discipline.

“The former is more or less of a military character, it demands blind and unconditional obedience, accommodation of the pupil to strict regulations of order framed by the teacher, attributes to these regulations a high educational influence, accomplishes their observation by rewards and punishments which are to awaken in the

pupil the motives of hope and fear, but have nothing in common with genuine moral impulses, secures to the teacher the necessary quiet for recitation and partly, too, the attention of the pupil, decency in the school-rooms and on the playgrounds, and is highly satisfied with this result. This kind of discipline is the one most practiced in the public schools of this country, and in some of them almost to perfection.

“Organic discipline tries to develop harmoniously the gifts of nature, to make the pupil feel the symmetrical growth of his powers and, by making him feel this mental growth, to make him happy. Then he will of his own accord adapt himself to the regulations of the school, which need not be very strict, because he is made to love the aim of the school as his own, because he loves teacher and study and hates all disturbance of this aim. This discipline is cultivated not to perfection as yet — in Germany and Switzerland — but it is the end which in many cases is reached.

“A rational teacher cannot hesitate a moment which of the two kinds of discipline to choose, provided he is at liberty to choose and knows how to do the thing. This latter, however is the most difficult part of the teacher’s calling. For but few of his pupils come to school so prepared, that he can apply his measures of harmonious development; most of them are so neglected by domestic training, that purely moral motives will accomplish but little, at any rate, but slowly. The *organic* discipline should nevertheless everywhere and under all circumstances be the teacher’s aim.

“The mechanical training, however, is very easy; every girl just from school and attempting to teach, may acquire it. A few strokes of the bell, a few commands given in a low voice, the teacher always speaking *mezzo voce*, a constant “watching” of the pupils from the rostrum, an anxious marking of all observances and violations of the rules and reporting the same to principals and parents, a great part of the schooltime stolen from instruction and spent in the painful maintenance of

order, a fine ear and a sharp eye—these are the never-failing means of such exterior training. The lower the aims of the teacher and school, the less education is the end, the more perfect will be this training, and just so the reverse.

“Now, there are educators—and even men of reputation—who demand that mechanical training should precede organic education, that the former might gradually be ennobled and might lead to the latter. These men say as long as decency, quiet and attention of the pupil are not secured, so long can he not be made susceptible to nobler moral motives. The law which at first is to him an outer inviolable coercion, in order that a beginning in education may be made, must gradually be engrafted into the pupil, must be implanted to him as his “Second Nature.”

“Nothing is better calculated to bribe the multitude than this apprehension. It is exactly the same method which is employed in training wild beasts and, generally, with the best success. Should not, however, this comparison of the growing man with the beast to be tamed, startle the gentlemen who advocate this method? First whip and hunger, then caresses and dainties, and finally the mere word — just as with the brute. First numerous punishments to illustrate the teacher’s will, then numerous rewards which may cause the child to obey, but will never instigate him to grow intellectually and morally — and finally mild suasion to create this growth *out of nothing*. “Out of nothing?” Yes, out of nothing!

“We acknowledge that the moral influence of a noble and spirited teacher may affect the “curbed brute” sympathetically and may arouse the germs of moral impulses. But how few such teachers have we, as long as scanty salaries and want of influence attract only a small fraction of the proper talent and character to the profession and prevent the education of *professional* teachers!

“In most instances teachers will study how to train

their pupils *mechanically*, and we dare hardly expect greater results than an outer decent behavior and an observance of the regulations, in spite of which the pupils in the street, as soon as the door is closed upon them, will return to their innate rudeness, scoff at the ends of the school and — become hypocrites. We deplore the simplicity which praises this kind of discipline as worthy of imitation. A little reflection on the following will do no harm.

“Only what makes man cheerful, contented and happy gives him moral power of action. To do the good, to comprehend the truth, to feel the beautiful — these constitute the moral and intellectual food which causes man’s powers to grow harmoniously, and by becoming sensible of this growth he is rendered happy and filled with moral strength. Whatever he does unwillingly, because he is forced or from without compelled to do, cannot make his powers grow, at least not harmoniously, can give him no inward law of progress, will remain forever on the surface; he will shake it off like the poodle dog does the water, when he is dismissed from control. There is consequently no connecting link between mechanical training and moral and intellectual education, unless the teacher understands to awaken the pupil’s powers by making him self-active from the very beginning. Then, however, he must destroy the bridge in his rear and depend alone upon the moral impulses of his pupil, he must wean him from the necessity of reward and punishment, he must rather sacrifice a part of the outer painful order and test how much he may gain by the voluntary cooperation of the pupil. He must honor him with his confidence, regarding him as his future peer, he must teach him to respect the dignity of human nature and by his actions to merit self-respect. In other words: the transition from mechanical training to organic education is not gradual, it is a leap into another world.

“Many people, however, say: If our youth do not learn to obey the laws at school, where shall they learn

it? Certainly not in life!—Wrong, say we; what in this manner he learns at school is not voluntary respect for the law which he himself has framed, but a hypocritical observance of it, where punishment or reward await him, and, when these are not in view, a clever violation of the law..... Who will deny that hypocrisy is a general vice? that self-government is a chimera, when it does not proceed from a love of the law which the citizen himself has framed? that our people are easily led off by outer show and seek to *deceive* by outer show? that education is not cherished on its own account, but for the secular advantages it secures? Examples for this assertion might be furnished by the hundred, but — examples are odious.....

“So do not let us say: Our public morals and our school discipline are of the same cast, are one a necessary consequence of the other and because we are too weak to reform them, we find mechanical discipline very easy. Besides this kind of discipline costs so little, it may be carried on with the most imperfectly trained teachers and bribes the thoughtless. It is not democratic, for but few of those that enter school, pass through the entire course and become independent and fitted for self-government—and these few owe least to their teachers, most to themselves. Are we, then, democratic? Is it not everybody’s maxim, “Help yourself, and God will help you?”—True educators may remember that a wide gap separates them from the multitude of mere school-keepers; among the great number of pupils the former consider each child as a sacred gift entrusted to their care, a gift which may be educated a useful man or woman; the latter do not feel this responsibility, because according to the above quoted maxim that every one has first to take care himself, they think that the teacher does his duty, if he draws to himself the willing ones and leaves the unwilling ones to get along as best they may.”

In this organic manner we have striven to discipline our pupils and shall, in the future, more and more strive

to educate not only business men, but independent thinking citizens who will cast their vote unmoved by party, sect or social prejudice.

IV. COURSE OF INSTRUCTION.

I come now to a subject which it gives me great pleasure to speak about, that is, the progress we have made in point of instruction. In connection with this I cannot forbear to praise the earnest devotion and the zeal and sense of duty of our teachers. For it is not palatial schoolhouses, the superiority of textbooks or apparatus that the progress in education depends upon, but *teachers*. Owing to their efforts and method of instruction, Belleville has good reasons to boast of her schools. If nothing else, this fact ought to convince the citizens of the superiority of our method and system of instruction; whatever schools in other places our pupils may enter — be it in the primary or higher grades — the teachers express themselves well pleased with the manner in which they were taught and the behavior they manifest. "The Belleville boys," said the principal of an academy to me, when asking him about our former pupils' progress and standing, "the Belleville boys are all doing well. We like to have them; they come well prepared and behave like gentlemen; send us more of them."

In the first place we teach nothing that the pupil cannot understand: we appeal very little to the memory but more to the reasoning faculties; we want that the pupil becomes self-active, that he observe and think for himself, not that the ready-made result be put into his hands which he has simply to memorize and be not an iota the wiser. What the pupils acquire through study alone has value to them; whatever they are to learn, must have a meaning, no mere parrot-like repetition of words is permitted. If anywhere, this is true in the first schoolyear; for this reason we attach great value to the manner in which the pupils acquire a knowledge of the letters and learn to read. Children do not and can-

not like abstractions; facts and objects must be presented to them, that by intuition they may learn to analyze and to combine. For this reason we have discarded the purely phonetic method and adopted a compromise between this and the word-method. The mere sound of the letter is as much an abstraction as the letter itself; the word has a meaning which the pupil can understand and from the spoken word he is to abstract the sounds. By the introduction of this method we have been enabled to do two years' work in reading in one, and if the method is better understood and carried out, we shall gain still more. Besides it is the only rational way to teach spelling from the *spoken* word successfully, for as the pupil has been made to analyze the word into its elementary sounds and knows and can form the characters representing these sounds, he can again combine these characters into words. In connection with this the formation of the letters has been taught very thoroughly and systematically during the first schoolyear, and if the teachers continue in this course, we shall turn out these pupils as good penmen without the employment of special teachers of penmanship.

By the cultivation of *Object Lessons* the power of speech of our pupils has been developed considerably, though I regret to have to say that, in some instances, this powerful means of instruction is not sufficiently cherished. If the teachers teach Object Lessons, because it is so prescribed in the Course of Study, if they do not feel that in primary instruction, this branch does more than reading, writing and ciphering put together, if they practice it unwillingly — not much good can come from it. And yet the training of the intuitive faculties of the child and the development of the power of speech are the basis of all future success in instruction — train the senses and you train the intellect, loosen the pupil's tongue and give him the means of communicating with his fellow-creatures, and he will be Moses and Aaron both. The pupils have made

marked progress in *Spelling* — in many instances the dictation exercises, which were not easy, have been written without mistakes.

Great stress has been laid upon the *Composition* exercises in all the grades, and the examination papers show that our teachers have been successful in teaching this branch. Children cannot be made to write compositions without being directed by the teacher; even if the pupils can express themselves fluently, they will not, unless guided by the teacher, arrange their thoughts logically. The first care then, of the teacher must be to awaken thought, to make the child observe and express himself orally on the subjects he wants to write about. No branches are better calculated for advanced pupils to bring this about than *Natural History* and *Philosophy*. Here objects from nature are presented to the pupils' view, the latter are made to observe them, first to express orally and then in writing what they have observed. By this method the pupils not only gain useful knowledge, which they can apply in after-life, but by using these studies as a means to *formal culture*, they become doubly valuable as mental discipline.

The introduction by act of the Legislature of the so called new studies into the curriculum has found many and bitter opponents and, if the complaints from many quarters that no tangible result is obtained from the study of these branches, are to be credited, they had better be stricken from the list of studies. But why is it that no tangible result is obtained in these studies? Is reading in a text book and reciting in the words of the text about objects or processes in nature study? or is it not a mere parrot-like rehashing of words and nothing but words? Where the Natural Sciences are treated in this way, no results can be expected and reading, or some other branch had better be substituted in their place. If any good is to be derived from the study of the Natural Sciences, the teachers must discard the text-book entirely, they must be so familiar with the branches they want to teach, must have so prepared

themselves for each lesson, that they can present the objects or perform the experiments and draw from the pupils the essential points. To do this the teachers must be naturalists themselves, they must explore the animal and vegetable world of their immediate neighborhood, they must have so practised the experiments in Natural Philosophy, that before the class they do not fail. Our district is fortunate in possessing in the men who are to teach these branches, adepts who improve every opportunity of improving their knowledge and their teaching powers.

Zoology, Botany and Natural Philosophy have been taught only so far, as our apparatus would permit; in the third and second grades where these studies were begun, the typical objects were selected from the several subdivisions and treated individually, whilst in the first grade and the High School a more systematic course was pursued; we proceed from the individuality to the generality, to the system. Our apparatus is yet insufficient; although the teachers have in many instances manufactured apparatus themselves, there are many articles — specimens for the study of zoology, machines in Physics — that have to be bought. I would therefore recommend the appropriation of a moderate sum for the purchase of apparatus.

Since the true teacher, however experienced he may be, must *prepare* himself for every recitation, and in the higher grades of our schools the studies are so multiplied, that thorough preparation for all of them would absorb every moment of his leisure hours, *departmental instruction* has been introduced into these grades since February and, as I can say, with good results. If instead of preparing himself for all the branches, the teacher has only to prepare himself for a part of them, he can certainly do the work more thoroughly and with more benefit for his pupils. Besides, in all the professions, speciality is the order of the day; physicians and lawyers cultivate a certain branch of their profession, generally such a branch, to which their disposition

and predilection best fit them. Thus in our High School and in the first grade three teachers divide among themselves the teaching of the several studies, whilst in the second and third grades two teachers interchange. The objections which are raised against departmental instruction: that the discipline would be impaired and that the pupils would have no time for preparation at school, are in our schools contradicted by the practise. Not only was the discipline improved, the attention of the pupils greater, the pupils were also by no means overtaxed. Change of occupation is recreation; the mind is always busy, and when it has dwelt for some time on one subject it will welcome a new teacher and a new subject with a greater appetite. At the age of twelve years, when departmental instruction is resorted to, pupils must be able to prepare part of their lessons at home; thereby they become independent and self-reliant.

All who had an opportunity of inspecting our pupils' drawing books, express themselves well pleased with the progress made in *Drawing*. The necessity of teaching this art in public schools becomes the more evident, when we consider how much the usefulness of a man depends to-day upon his ability to demonstrate in the several trades and arts what he intends to create with the work of his hands. In this branch, too, Natural History and Philosophy have furnished to a great extent the objects for practise. The pupils have drawn from nature machines and animals and plants beside the copies which the teachers placed for them on the blackboard. If, in order to fix what has been observed by means of the pencil, pupils have the more carefully to observe the details, no better means can be found for cultivating the pupils' habits of observation; and if the beauties in Nature can be recognized by close inspection and this recognition contributes to man's happiness, we will the more appreciate this art.

The extension of the study of *German* to the first and second schoolyears has proved a very wholesome

measure and has contributed much to make the quite young pupils of German parentage love their school and to comprehend the English instruction the better. If the child coming from his home where he has heard nothing but German spoken, enters school and is there addressed in English, in accents foreign to him, how is he to reconcile the life in the family to the new life he now begins? In a community like ours, where 80 per cent. of the pupils come from German speaking families, the teaching of German at school is an imperative necessity. The number of pupils partaking in the German instruction has by the above mentioned measure been almost doubled, although the teaching force has thereby been increased only by one. This increase of pupils studying German is not only true of the German-Americans, but not less so of the Anglo-Americans, and if the latter continue the course, they will leave school masters of two languages, as well as the former. By making the pupil's promotion dependent on their proficiency in German, as well as in the other branches, we have gained much more gratifying results and this will become the more apparent, when those pupils who began the study of German, at their entering school, rise to the higher grades.

About the work done in *Vocal Music* I can say that most of the teachers have practised with zeal, and understanding the exercises which the teacher of Music introduced in the several grades, that the pupils love to sing and that the results obtained in this one year — I refer you to the examination papers appended to this report — have been very satisfactory. About the prospects in *Vocal Music* and the suggestions for the better cultivation of this branch, the report of the teacher of Music will speak for itself.

To HENRY RAAB, Supt. Schools.

Sir.

By introducing Vocal Music as an obligatory branch into our schools the Board of Education has filled a void which ought nowhere to exist where the people demand schools of a systematic and progressive character. If it is a truth that school has to develop harmoniously all the faculties of the child in order to educate truly free and happy men and women, music, and especially vocal music, the most effective means for cultivating the heart, cannot be excluded from its Course of Study. Music is the language of our feelings, and especially at present, when teachers are not unjustly reproached for cultivating but the intellect, the culture of this language should be particularly emphasized. The sense for the beautiful and ideal, which otherwise would be stifled by the material interests of life, is awakened and elevated by this art. Beside this, the common school is the only institution for efficiently diffusing musical culture among the people. School alone can lead the children of *all* citizens simultaneously to the same end, something which cannot be done by individual instruction, because time, means and opportunity are wanting in the greatest number of cases. School alone can develop the *musical ear*, the *rhythmic sense* and the *imagination* of the masses. All further musical education, whether productive or receptive, is based upon the development of these three factors.

It cannot be the object of musical instruction at school to produce artists and there is no danger that pupils will one day leave school as opera-singers, as little as we can expect by instruction in Natural Science to produce an Agassiz, or by teaching Drawing a Michael Angelo, or by practising Gymnastics an acrobat. "The seeds of the genuine song shall be sown into the pupils' hearts, that the rank tares and weeds of profane and vulgar music may find no place to grow in them."

There are three forms of cultivating vocal music: individual or solo-singing, where the teacher's care is devoted to the most subtle training of the voice and the rendition of the composition; for obvious reasons this cannot be attempted at common schools. The common school can either practise singing by rote, or artistic singing, the latter of which will teach the pupil to execute and appreciate more difficult compositions, while the former must be confined to the simplest and easiest pieces, which are drilled into the ear by frequent repetitions without making use of musical notation. The latter form of musical instruction is undoubtedly of great value, and is particularly adapted for such schools, as have neither time nor means to teach music systematically; it must also be practised in the lower grades, where the pupils are not mature for methodical instruction in music. Singing by rote, however, will not suffice, where more than the simplest compositions are to be rendered and where the pupils shall be furnished the means of practising the art in the social circle. To gain this object the pupils must be enabled to read music at sight, the ear and rhythmic sense must be developed and so cultivated, that not only simple songs, but also compositions of greater musical value can be performed; musical culture will then become more general; we will beget choirs that are able to render any musical composition in the shortest possible time, not such as must in eternal servitude and helplessness be drilled into their tasks.

This latter form of musical culture was introduced into our schools during the past year in the intermediate and higher grades. The instruction was conducted by one teacher who at the same time taught the German language in the second, third and fourth grades at the Franklin School. But, one teacher not being able to do all the work in 33 schools, part of it devolved upon the regular teachers. It is true that most of them had not the necessary musical training and consequently in the beginning of the year but slow progress was made, but at the opening of the second term it became evident,

that, wherever the regular teachers did their duty, quite satisfactory results were obtained; some of the teachers doing excellent work, although but one quarter of an hour per day was devoted to this branch. There is no reason why we should not obtain as favorable results in music, as cities like St. Louis, Cincinnati, Chicago, Cleveland, Toledo and Dayton, where a similar organization for teaching music was introduced many years ago. Most of these cities, it is true, have normal schools, in which the teachers are prepared for teaching this branch; yet, do not teachers all over the country attempt to teach all the other branches, without being specially trained for them and, nevertheless, obtain good results by energy and the good will to do something? The experience of the past proves most conclusively, that even under less favorable circumstances Music can be taught successfully, and it is my firm conviction that the results would have been still greater, had not some of the teachers actually shown want of energy.

I beg leave to make the following suggestions for furthering this branch of instruction:

1) Singing is a legitimate and obligatory branch of instruction, and the several teachers are held responsible for their pupils' proficiency in this branch as well as in the others.

2) The result of the semi-annual examinations in music of each school should be communicated to the teachers by the superintendent.

In submitting this report I cannot forbear mentioning the zeal and good will manifested by Misses Challenor, Eckert, Holbrook, Harding, West, Knispel, Schneider, Bechtold and Mrs. Thwing, also Messrs. Klein, McQuilkin and Reiss, and gratefully acknowledging the readiness with which they assisted me in my labors.

Respectfully,

EMIL FEIGENBUTZ,

Teacher of Vocal music.

In Arithmetic, which for years has been the trouble of both teachers and pupils, a study on which most and the best hours of the day are spent, our pupils do not exhibit that proficiency which they ought to. Pupils are drilled in abstract processes, instead of presenting them concrete examples, from which they might abstract the rules and express them afterwards in terse language. The recitations should at the same time be short and lively, and the young pupils should never be required to deal with numbers too large for their comprehension. Does life perhaps present them millions to deal with, or, are not the arithmetical processes of every-day-life confined to numbers within thousand? The Course of Study shows a considerable change in this direction; the time for Arithmetic is curtailed, and the numbers are to be studied first and then the processes, which in fact are "few and far between" and they can, if the teachers understand their business, be taught in very little time.

The same course is to be pursued in Grammar; we first must give our pupils practice in the use of language spoken and written and then cause them to find the rules themselves. The study of theoretical grammar is reserved for the higher grades.

The civilization of our country is based upon that of Europe, modified by geographical position and climate and the many nationalities, which have entered into the formation of society here. It is my opinion that we cannot fully understand the political institutions and the laws that govern society in the United States, unless we become familiar with the development of mankind and especially of those nations which have sent their offspring to our shores. To afford our pupils an opportunity to gain this familiarity and to furnish them with the means to read with more advantage when they have left school, the study of *Universal History* ought to be taken up in our High School, or as soon as the study of U. S. history can be finished.

V. REMARKS AND SUGGESTIONS.

The cost of tuition per pupil in our schools was considerably diminished for the past year, amounting only to \$11.25 on the average number of pupils belonging. This is much less than is paid for tuition in other cities similar in size to Belleville. As far as the data were available I give them in the following table :

CITIES	Cincinnati.	Chicago.	Washington.	St. Louis.	Decatur.	Jacksonville.	Belleville.
For the year.....	1870-1	1872-3	1873-4	1873-4	1873-4	1873-4	1874-5
Bonded debt.....					\$40,000 00		\$20,300 00
Interest paid.....					5,352 27	\$4,205 51	8,106 00
For tuition alone....	\$17 85	\$14 93	\$15 00	\$18 00	\$11 57	\$17 85	\$11 25
For incidentals.....	3 27	6 98	2 71	2 71		3 50	1 95
For all expenses....	21 12	21 92	21 51	21 51	20 98	26 61	19 02

It will be seen from this table that, notwithstanding our much greater debt, we educate our youth cheaper than any of the above named cities, and that also for tuition alone or for incidentals we pay a smaller sum. This also furnishes conclusive evidence that free school education is the cheapest and another argument why the State should make education compulsory. No private institution can at the above quoted sums furnish such educational facilities as the State school can. If all pupils that are now instructed in private institutions were to attend the public schools, the tuition would be still cheaper and a better general culture of the masses would be the result. All the laws that have thus far been enacted by the legislatures of the different states will not accomplish the desired object; in the first place the school-time required by these laws is too short and interrupted, and in the second place, the State not having the supervision of the private schools, institutions may spring into existence — and there are such already — in which the minimum of intellectual culture is sought. Half measures of this kind cannot insure the education of the masses. If education is made compulsory — and sooner or later the State will have to adopt it as a measure of self defense—the citizens must

also by law be compelled to register the births, and penalties must be imposed upon such parents as neglect to send their children to school. But I have no doubt that these penalties need be imposed only for a short time, that soon people will befriend themselves with the new order of things, and illiteracy and consequent immorality will be greatly diminished, if not banished from society.

To attract all to the public schools, all religious instruction must be excluded from its course of study; the teaching must be altogether secular; only the principles of morality and virtue, which most fortunately are the same with all creeds, should be impressed on our pupils; Christians of all denominations, Israelites and Free-thinkers must be able to send their children thither without fear that their conscience is oppressed.

A very common error, and one that does more to retard the progress of education than any other, is this, that people still believe any one who has acquired knowledge has thereby also gained the ability to impart it, that any girl just from school is capable of teaching younger children the rudiments of knowledge. If you want to build a house, will you employ a young man who has just completed his apprenticeship with a carpenter or mason and entrust him with the execution of your plans? or, will you not rather employ the skilled master workman who by his knowledge and experience has given proof that he will do a good job? If this is true in the construction of a house, how much more must it be true when the formation of character, the education of man and woman is to be accomplished? Yet constantly do school authorities sin against this theory and leave the destiny of the race and the republic to unprepared, unexperienced apprentices. Why? Because it is *cheap*. Cheap? Let us consider this for a moment. What if your house built by the apprentice, the defects hid by paint and plastering, tumble down after a few years, thereby endangering the life of the inhabitants, will not the training done by your hireling, the defects also plastered over by a few shallow phrases and outward manners, collapse, when the vicissitudes of life test its

strength? Can all the money in the world repair the fall? And does not the downfall of one cause the fall of others? Is not the loss to society irreparable? Do we expect a change of matters from time, unless we lay our hands to the plow and speed the cause? Will jails, penitentiaries and insane asylums repair what was neglected at the schoolhouse? Would it not have been wiser and true economy to prevent, rather than to cure?

Teaching is an art and the demands upon the teacher are such as to require talent, will and preparation. Many of those who embark annually upon the ocean of teaching fail, because one of these factors is wanting:

"Many are called, but few are chosen."

Many fail, because they lack the energy to complete what they begin, others because the necessary talent or preparation are wanting. Persons who wish to become teachers ought therefore to examine themselves carefully whether they possess the moral courage and the ability to stand the hardships of the profession, and if they have not those, rather to embrace some other calling.

As long as there is not a sufficient number of teachers trained for the profession, we must not expect to see such salaries paid for teaching as, it seems, the arduities of the calling should warrant. We employ young men and women with little or no experience, and only after a term's labor can we determine, whether they possess the necessary qualifications; yet, unless serious complaints are made against them or they prove utterly incompetent, we have to keep them in their positions, for fear that by dismissing them, we have to employ others equally unqualified on probation. The great desideratum, then, is *teachers*, teachers who with a love for the profession combine the necessary training. Where there is now one normal school, the State ought to establish a dozen to supply the want of *skilled* teachers. As matters stand now, the salaries paid must adhere to the person, not to the situation: in this respect a schoolsystem will compare to a factory, where

the employers place the workmen in such positions as are best fitted for them and they are paid according to the services they render. But, if we have once secured good teachers, men and women of character and experience, they should be esteemed and cherished by the parents as their best friends.

On the third Saturday of every month the teachers of our district hold an institute, where the course of study, methods of instruction and measures of discipline are discussed; these meetings promote harmony of the system and uniformity in the several grades. Those of our teachers who instruct in German, assemble an hour earlier and discuss topics for the better work in that branch. During the past year these institutes were well attended and a lively interest manifested in the exercises. Beside class exercises and model classes, questions like the following were discussed:

“The proper method of conducting recitations.”

“Why should teachers require their pupils to take proper care of their books, pens etc.?”

“The object and character of school-punishment.”

“The value of written examinations.”

“The teacher’s influence on his pupils outside of school.”

“The advantages and disadvantages of concert speaking.”

At these meetings the experienced teachers of our corps communicated their knowledge and experience to the younger ones, thus forming a kind of normal school.

In the foregoing pages I have endeavored to present you a true picture of the condition of our schools and, in concluding these remarks, I embrace the opportunity to express my profound acknowledgments for the uniform kindness and consistent support which have been shown to my official acts, as well as for the courtesy and kindness received at your hands.

Your obedient servant.

HENRY RAAB,
Superintendent.

*Financial Report of Receipts and Expenditures for the
Belleville Public Schools, District 4, T. 1 N. R. 8 W.
for the fiscal year, ending March 31, 1875.*

RECEIPTS.

Cash on hand, April 1st, 1874,.....	\$433.28
State and County Fund,.....	4,250.72
Special Tax,.....	23,824.21
Tuition fees from non-resident pupils,....	500.00
Refreshment stalls at May Nic Nic,.....	85.00
Interest refunded.....	5.00
Cash Loan,.....	4,000.00
	<hr/>
	\$33,300.00

EXPENDITURES.

As per annexed schedule.....	\$32,140.00
Balance in Treasury, March 31, 1875,.....	1,150.00
	<hr/>
	\$33,300.00

INDEBTEDNESS OF DISTRICT 4.

Amount of Bonds issued at 10 per cent.,.....	\$85,800.00
Amount of Bonds issued at 8 per cent.....	13,500.00
	<hr/>
Total Amount of Indebtedness.....	\$99,300.00
Converted into 8 per cent. bearing bonds during fiscal year.....	\$10,000.00

No. of teachers employed in 1873-74 : Males 8, Females 28, Total 36.

1874-75 : Males 13, Females 26, Total 39.

Increase this year : 3.

Expenditures 1872-73... \$32,517.61. 1873-74.....\$33,815.98. 1874-75.....\$32,140.00.

*Schedule exhibiting the expenditures of the fiscal year
ending March 31, 1875.*

	Franklin School	Washingt. School.	W. Bellev School.	Lincoln School.	Special Branches.	TOTAL.
Salaries.....	9,331.31	5,729.55	2,367.36	670.23	2,056.03	20,154.48
Improvements & Repairs	562.49	292.23	72.64	121.00		1,051.36
Interest*).....						8,124.00
Apparatus.....	186.10	72.42	52.65	12.40		323.57
Fuel.....	146.62	112.57	30.54	19.29		309.02
Stationery.....	46.30	31.75	10.75	2.00		90.80
Furniture.....	107.30	177.00	137.25	115.50		537.05
Insurance.....	250.00	265.00				515.00
Miscellaneous.....						27.00
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	10,652.12	6,657.12	3,278.19	831.02	2,056.03	32,140.00

*) Including \$75 paid on note discounted in Bank.

TABLE NO. I,—showing the number of teachers employed and the salaries paid during the year.

SCHOOLS.	Teachers		Total amount paid for tuition.	Salaries paid males								Sal. pd. females.								
	Male.	Female.		\$1,000	\$1,350	\$1,700	\$1,900	\$700	\$850	\$900	\$550	\$400	\$325	\$500	\$450	\$375	\$350	\$325	\$300	
Franklin School.....	4	14	\$9,275	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	
Washington School.....	**	8	5,475	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
West Belleville School.....	12	4	3,205	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Lincoln School.....	1	1	650	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Special Branches.....	12	1	2,175	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	12	27	\$20,600	1	1	1	3	1	1	1	1	2	1	1	2	4	4	2	8	5

* One teacher employed since February.

** One school kept in South Belleville Engine House.

TABLE NO. II,—showing the number of pupils enrolled and the average number belonging, also the per cent. of semi-annual promotions.

ENROLLED.	Males.	Females.	Both.	Average number of pupils belonging.	PER CENT. PROMOTED.
During the 1st quarter.	917	941	1858	1695	At close of 2d quarter 40 pCt
During the 2d quarter.	923	883	1756	1658	
During the 3d quarter.	945	835	1783	1619	At close of 4th quarter 38 pCt.
During the 4th quarter.	1016	929	1976	1573	

During the year 78 pCt.

TABLE NO. III,—showing the average daily attendance, also the number of tardinesses for each month of the schoolyear.

MONTHS.	No. of pupils enrolled.	Average daily attendance.	Per cent. of daily attendance.	No. of tardinesses.	No. of pupils neither absent nor tardy.
September, 13 schooldays	1565	1482	95	165	875
October, 21 schooldays	1647	1513	92	286	690
November, 20 schooldays	1626	1487	91	350	708
December, 18 schooldays	1591	1421	89	419	439
January, 20 schooldays	1573	1413	90	788	554
February, 20 schooldays	1623	1516	91	526	670
March, 21 schooldays	1631	1474	91	416	475
April, 22 schooldays	1631	1487	91	193	659
May, 20 schooldays	1591	1435	90	189	485
June, 23 schooldays	1495	1281	86	264	349
During the year, 198 schooldays	1601	1450	91	3228	Average 587

TABLE NO. IV,—showing the average number of pupils taught by one teacher in the different grades, the average amount of salary paid per teacher, also the cost of tuition per pupil in the several grades.

GRADES.	Number of teachers.	Amount paid for tuition	Number of pupils enrolled.	Average number of pupils belonging.	Average number of pupils taught by one teacher		Average amount of salary paid per teacher.	Cost of tuition per pupil on the average number belonging.
					On the number enrolled	On the number belonging.		
Eighth Grade.	2	2700	157	78	42	43	\$337 50	\$7.92
Seventh Grade.	6	2000	125	20	46	45	333 33	7 49
Sixth Grade.	5	1675	102	20	52	52	331 00	6 49
Fifth Grade.	5	2775	154	30	51	48	455 00	9 52
Fourth Grade.	4	2650	101	25	50	49	662 50	13 45
Third Grade.	3	1025	93	31	46	44	512 50	11 05
Second Grade.	3	2650	103	34	51	50	1025 00	20 79
First Grade.	3	1800	91	30	45	41	1200 00	27 63
High School.	1	1600	45	44	45	44	1600 00	35 56
Lincoln School.	1	650	24	24	28	24	650 00	27 08
Gen'l Average.	36	18425	1741	168	46	44	\$511 50	\$11 25

*One additional teacher during second term.

TABLE NO. V,—showing the cost of tuition per pupil in 1873-74 and in 1874-75.

	In 1873-74.	In 1874-75.
Cost of tuition per pupil on the whole amount expended.....	\$22 82	\$19 02
Cost of tuition per pupil on the whole amount expended, exclusive of interest paid on bonded debt.....	26 71	14 64
Cost of tuition per pupil on the amount paid for salaries alone.....	14 98	11 36
Cost per pupil for incidentals.....		1 36
Cost of supervision per pupil.....		1 04
Cost of tuition per pupil in German Language.....		27
Cost of tuition per pupil in Vocal Music.....		2

TABLE NO. VI,—showing the promotions to higher grades during 1874-75.

GRADES.	FIRST TERM			SECOND TERM.		
	Average No belonging.	Number of pupils promoted.	Per cent. promoted.	Average No belonging.	Number of pupils promoted.	Per cent. promoted.
From Eighth Grade.....	304	124	41	313	140	44
From Seventh Grade.....	253	103	41	254	107	42
From Sixth Grade.....	211	86	41	250	102	41
From Fifth Grade.....	179	73	41	172	71	41
From Fourth Grade.....	136	56	41	101	41	41
From Third Grade.....	93	39	42	89	37	42
From Second Grade.....	72	30	42	72	30	42
From First Grade.....	42	18	43	41	17	41

TABLE NO. VII,—showing the number and parentage of pupils studying German.

GRADES.	First Quarter		Second Quarter		Third Quarter		Fourth Quarter		BY WHOM TAUGHT.
	Anglo-Americans.	German-Americans.	Anglo-Americans.	German-Americans.	Anglo-Americans.	German-Americans.	Anglo-Americans.	German-Americans.	
Eighth Grade.	33	303	72	254	41	235	39	270	Miss Dauth, Miss Bechtold, Miss Bressler, Mr. Pfuhl, Miss Dauth, Miss Knipel, Miss Schneider, Mr. Pfuhl, Miss Dauth, Miss Schneider, Mr. Pfuhl, Miss Dauth, Mrs. Ihardt, Mr. Pfuhl, Mr. Reiss, Miss Dauth, Mr. Pfuhl, Mr. Reiss, Mr. Feigenbutz, Miss Challenor, Mr. Pfuhl, Mr. Feigenbutz, Mr. Feigenbutz, Mr. Pfuhl, Mr. Klein, Mr. Brna, Mr. Dapprich, Mr. Dapprich.
Seventh Grade	41	216	33	231	30	223	19	230	
Sixth Grade.	17	198	30	195	20	204	16	198	
Fifth Grade.	9	206	13	198	13	186	9	187	
Fourth Grade.	12	143	12	166	13	159	14	154	
Third Grade.	17	69	13	64	18	61	14	57	
Second Grade.	26	61	30	63	12	70	10	66	
First Grade.	10	26	9	34	19	62	13	59	
High School.	8	17	8	20	7	19	7	19	
Total	175	1249	170	1205	173	1215	136	1240	
	1424		1385		1458		1376		

TABLE NO. VIII,—showing the ages of the pupils in different grades.

Grades.	Age according to Grade. From	TOTAL.													
		From 6—7 years.	From 7—8 years.	From 8—9 years.	From 9—10 years.	From 10—11 years.	From 11—12 years.	From 12—13 years.	From 13—14 years.	From 14—15 years.	From 15—16 years.	From 16—17 years.	From 17—18 years.	From 18—19 years.	TOTAL.
VIII Gr.	6—7 years	126													126
VII Gr.	7—8 "		142												142
VI Gr.	8—9 "		11	100											111
V Gr.	9—10 "				100										100
IV Gr.	10—11 "					11									11
III Gr.	11—12 "						3								3
II Gr.	12—13 "							10							10
I Gr.	13—14 "								14						14
High Sch.	Above 14 "									11					11
Line Sch.		3													3
TOTAL.		126	155	111	111	15	10	14	11	25	34	10	3	1655	

TABLE NO. IX,—showing the number and cause of suspensions during the year.

For refusing to buy the prescribed text book (Rules and Regulations Sec. 36),	1
For uncleanliness (Rules and Regulations Sec 42),	1
For irregularity of attendance and want of punctuality (Rules and Regulations Sec. 44)	22
For wilful disobedience and gross misconduct (Rules and Regulations Sec. 45),	17
Number of suspensions during the year.	41
Number of pupils reinstated, the parents promising to cooperate with teachers.	22

SEM-ANNUAL EXAMINATION.

DIRECTIONS TO PUPILS.—Write on each paper your name, your age, and the grade to which you belong. All writing must be done with pen and ink, and none but neatly written work will be considered. All communications are forbidden. As soon as you are done, hand your paper to the teacher. Whenever an analysis is required, no credit will be given without it. Number your answers so as to correspond with the questions.

HIGH SCHOOL.

I GRAMMAR.

1. Name all the elements which may constitute a sentence and classify them.
2. How many kinds of sentences are there?
3. Write a direct question and change it to an indirect one, punctuating carefully.
4. What may any element of a sentence consist of? Illustrate by an example.
5. Write the second person singular number indicative of all the tenses, 1. of a regular verb, 2. of an irregular verb?
6. Write a sentence using the relative pronoun "which" in the nominative case, another using it in the possessive case, and a third one using it in the objective case, telling what element in the sentence it is.
7. Expand the italicized words in the following sentence into a clause, and tell what element this clause is: "James told John *to let him alone.*"
8. Give a complete rule for the formation of the passive voice of verbs, also the principal parts of *to strike* in the passive voice.
9. Analyze:
"And canst thou, Mother, for a moment think,
"That we, thy children, when old age shall shed
"Its blanching honors on thy weary head.
"Could from our best of duties ever shrink?"
10. Correct the following expressions, giving reasons: "The woman which came with us, is sick." "Those kind of men." "Servants of both sexes to hire on moderate terms." "Those are the same sums we had before." "Whom do you think it was?"

II COMPOSITION.

How is wheat converted into bread?

III. ARITHMETIC.

1. Divide 15 by 12 thousandths, and multiply the result by $\frac{3}{40}$ reduced to a decimal.

2. How many thimbles, each weighing 7 pwts. 5 grs. can be made from 7 lbs. 6 oz. 9 pwts of silver, and what will they be worth at \$9.50 a dozen?

3. *By Proportion.* If 17½ bu. of rye cost \$19.50, how many bushels can be bought for \$58.60?

4. An orchard containing 6 acres 12 square rods is three times as long as broad. Required the length and breadth.

5. If 12,977,875 cubical blocks were piled in cubical form, how many blocks would there be in the height or vertical edge of the pile?

6. If 4 men in 2½ days mow 6½ acres of grass, by working 8½ hours each day, how many acres will 15 men mow in 3½ days by working 9 hours per day?

7. How many hogsheads of water will fill a cylindrical cistern 9 ft. in diameter and 10 ft. deep?

8. If a schoolroom is 14 feet high, how many square feet must it have upon the floor in order that 60 pupils and the teacher may each have 300 cubic feet of air?

9. A man bequeathed his fortune to his family in the following way; he gave $\frac{1}{2}$ to his wife, $\frac{1}{5}$ to his son and divided the rest equally between his 5 daughters, each of whom received \$4070; what was his fortune? (*Analysis required.*)

10. Define ratio, proportion, means, extremes, surd root.

IV. HISTORY.

1. Into what distinct periods is the history of the United States divided? Give the dates.

2. State the difference in the character of the first settlers of Virginia and Massachusetts.

3. Give a short account of the settlement of Rhode Island, and of Maryland.

4. Name five prominent generals, also five prominent statesmen of the American Revolution. Name also some men who distinguished themselves at sea during the Revolution.

5. Name the causes of the second war with England. Give the time when it began, the principal battles on land and at sea, when and where peace was made, and the stipulations of the treaty of peace.

6. What was the principal event of President Jackson's administration? State all you know about this event.

7. When and where did the war of the Rebellion begin? When and where did it end?

8. What is the "Monroe doctrine"? When was it proclaimed?

6. What is meant by the veto-power of the President?

10. Of how many departments does the government of the United States consist? What is a writ of Habeas Corpus?

V. PHYSIOLOGY.

1. Of how many bones is the spinal column of man composed? What do we call them? How many different kinds are distinguished?

2. Which animals have a very large, which a very small number of vertebræ?

3. Which of the vertebræ are united into one bone in mammals? Which in birds?

4. What modification is found in the muscles of fishes? What color have they?

5. Compare the teeth of the different mammals; tell what kinds they have and in what number?

6. How many divisions are found in the stomach of a ruminant?

7. In which of the mammals are the intestines very long? In which but short?

8. What difference do we find in comparing the hearts of mammals, reptiles, fishes?

9. Why do we breathe?

10. Give the parts of the eye, and tell how they are arranged.

VI. ALGEBRA.

1. Define polynomial, exponent, power, formula, root.

2. Factor $m^{10} - y^8, e^{12} - f^{12}$.

3. What is the least common multiple of several quantities? Find the least common multiple of $c^2 - d^2, c^4 - d^4, c^3 - d^3, c^6 - d^6$.

4. What is the greatest common divisor of several quantities? Find the greatest common divisor of $c^4 - d^4, c^6 - d^6, c^{12} - d^{12}$.

5. Reduce $\frac{5a^2 + 5ax}{a^2 - x^2} =$

6. $\sqrt{(4x^4 + 8ax^3 + 4a^2x^2 + 16b^2x^2 + 16ab^2x + 16b^4)} =$

7. A certain sum of money shall be divided among three persons, A, B and C. A shall receive \$3000 less than one-half, B \$1000 less than one-third, C \$800 more

than one-fourth of this sum. Required the sum and each one's share.

8. A person being asked how many pages he could write per week, said: "I work but 4 hours per day, and cannot write 70 pages as I should like to. But if I were to work 10 hours per day, I could write just as many pages more than 70 as I now do write less than 70." How many pages did he write per week?

9. A and B together own $\frac{1}{3}$ as many dollars as C; B and C together own 6 times as many dollars as A; if B had \$380 more, he would be just as rich as A and C together. How many dollars has each?

10. A farmer has 3 bins, each containing three kinds of grain, wheat, rye and barley. The first bin contains 8 bu. wheat, 3 bu. rye and 5 bu. barley; the second bin contains 3 bu. wheat, 10 bu. rye and 7 bu. barley; the third bin contains 6 bu. wheat, 9 bu. rye and 13 bu. barley. The value of the grain in the first bin is \$7.34, in the second \$8.12, and in the third \$11.30. What was the value of one bushel of each kind of grain?

VII. GEOMETRY.

1. Name, illustrate by diagram, and define the different kinds of triangles and quadrilaterals.

2. Define Theorem, Axiom, Problem.

3. Two angles of a triangle are 60 degrees and 70 degrees respectively; what is the third? What is the geometrical truth used in finding your result?

4. Define circle, radius, tangent. Prove what is the measure of the angle formed by 2 chords intersecting within a circle.

5. Two pentagons are similar; two homologous sides are 4 and 5, the area of the smaller is 1600 sq. ft.; what is the area of the larger?

6. The diameter of a circle is 6; how do you find the circumference? The area?

7. The area of a circle is 15; how do you find the radius? The circumference?

8. Define a plane. When are a straight line and a plane parallel?

9. Prove that the area of a trapezoid is equal to half the product or the sum of its parallel side by its altitude.

10. Prove that each angle of a hexagon is equal to $\frac{2}{3}$ of a right angle.

VIII. NATURAL PHILOSOPHY.

1. Why is there a space left between the ends of the rails on a railroad track?
2. Why does sprinkling a floor with water cool the air?
3. Will dew form on an iron bridge? On a plank walk?
4. Why does the snow at the foot of a tree melt sooner than in the open field?
5. How does the heat at two feet from the fire compare with that at a distance of four feet?
6. In which instruments do we find magnets?
7. Why is magnetism retained in steel and not in iron?
8. Give the law of attraction and repulsion.
9. How can a bar of steel be magnetized?
10. Name the different kinds of electricity.
11. Why is dynamic electricity also called Galvanic or Voltaic?
12. How is Galvanic electricity generated?
13. What are electromotors of the first order, what of the second?
14. What is a Galvanic battery?
15. What is a telegraph? Name its parts.

IX. GERMAN.

Sprachlehre.

1. Bestimme starker Kaffee, süße Milch, ein lehrreiches Buch.
2. Conjugire die gegenwärtige Zeit von essen und nehmen.
3. Bilde einen Satz, in dem sämtliche Satzglieder enthalten sind und setze die Satzzeichen.
4. Schreibe einen Vers aus dem Gedächtnisse nieder und setze die Satzzeichen.
5. Vervollständige folgende Sätze:
 Ich werde meine Aufgabe lernen, sobald
 Karl hat deinen Brief nicht beantwortet weil
 Viele Berge sind so hoch, daß

Aussatz.

Wilhelm der Eroberer.

FIRST GRADE - DIVISION A.

I GRAMMAR.

1. "Columbus was invited *to dine with the Archbishop of Salamanca.*" What element are the italicized words? Expand them into a clause.

2. Form a sentence containing an objective clause ; point out the connective and tell what element it is.

3. Write three regular transitive, and three irregular transitive verbs, giving their principal parts.

4. Write a sentence containing a noun in the possessive case, plural number, and tell what element in the sentence it is.

5. Give a complete rule for the formation of the comparative and superlative degrees of adjectives.

6. Analyze : "I will illustrate what I mean by an example."

7. Decline the personal pronoun of the first person.

8. Write a sentence in which the verb of the predicate requires a direct and an indirect object, then place this sentence into the passive voice.

9. What part of speech may "*that*" be ? Illustrate by examples.

10. Correct the following sentences giving reasons : "Who are you talking to ?" "How is your brother and sister to-day ?" "Wasn't you here this morning ?" "I don't like them apples."

II. HISTORY.

1. Give a short account of the Seminole war.

2. When was Missouri admitted as a state ? What was the "Missouri Compromise ?"

3. Tell what you know about Lafayette and his visit to the United States during Monroe's administration.

4. Who were the "nullifiers ?" What measures did President Jackson take against them ?

5. Name the Presidents who died while in office and the Vicepresidents who succeeded them.

6. What were the causes that led to the war with Mexico ?

7. Name the principal leaders on both sides, the principal battles fought, when peace was made, and the stipulations of the same.

8. State what you know about John Brown's raid into Virginia.

9. What were the causes that led to the war of the Rebellion ? Where did hostilities commence ?

10. Which states seceded from the Union ? What name did these states adopt and who was there president ?

III. ARITHMETIC.

1. If a barrel of flour will make 180 ten-cent loaves, how many eight-cent loaves will it make? (*To be solved by a statement in proportion.*)

2. On the 1st of January, 1873, A commenced business with a capital of \$17,000; on the 1st of April B entered into the business, advancing \$12,000 capital; and on the 1st of July C was admitted as a partner and advanced \$16,000 capital, at the end of the year it was found that the firm had gained \$8,160. How much of the gain ought each to receive?

3. A grocer mixes 120 lbs. of sugar at 10 cents a pound, 140 lbs. at 12 cts., and 60 lbs. at 14 cts.; at what rate must he sell it per pound to clear 20 per cent. on its cost?

4. What is the difference between the interest on \$584 for 66 days at 6 per cent. and the interest on \$500 for 63 days at 7 per cent.?

5. What is the present value of a note for \$1300, due in 2 years, 8 months at 7 per cent.? What is the discount?

6. A note having 90 days to run at the rate of 7 per cent. is to be made, so that the proceeds shall be \$2050; what is the face of the note? (*Bank discount.*)

7. If 30 reams of paper will print 1500 pamphlets of 10 sheets each, how many reams will print 740 pamphlets of 12 sheets each?

8. If 4 men can dig a ditch 72 rds. long, 5 ft. wide and 2 ft. deep in 12 days, how many men can dig a ditch 120 rds. long, 6 ft. wide, and 1 ft. 6 in. deep in 9 days?

9. What number is that which being increased by its half, its third and 18 more, will be doubled? (*Analysis required.*)

10. Define interest, amount, present worth, discount, principal.

IV. GEOGRAPHY.

1. What mountain chain separates Norway from Sweden? Spain from France? Europe from Asia?

2. What sea and what channels separate Ireland from Great Britain?

3. Where are the Scilly Islands? Sardinia and Corsica? Malta?

4. Locate Antwerp, Bordeaux, Barcelona, Naples, Odessa.

5. Name the peninsulas of Europe extending in a southerly direction, the waters into which they project, and their respective capes.

6. Give a short description of Asia, its boundaries, mountains, rivers, islands and capes.

7. Name the political divisions of Asia and their capitals.

8. Locate Jerusalem, Muscat, Bombay, Bangkok, Shanghai, Jeddo.

9. Which extends farther south, the United States or Europe? South America or Africa? Which farther west, Europe or Africa? Which farther east, North America or South America?

10. How do the continents compare in size? In which parts of the world are the highest mountains found? The most extensive plains?

V. COMPOSITION.

Minerals and Mining.

VI. NATURAL SCIENCES.

1. When do we call any natural object an animal when a plant, when a mineral?

2. Name some animals not highly developed and tell why.

3. What are inhaling-pores in sponges, what exhaling-pores; how are these pores connected?

4. Of what may the skeleton of a sponge consist?

5. Which sponges are of use to us and in what manner?

6. Name different corals, and state in what this difference consists.

7. Are corals the houses or skeletons of animals?

8. What are Echinodermata, and why are they called by this name?

10. Have you seen the skeleton of an echinoderm, and what did it resemble?

11. What does Atwood's Falling Machine explain?

12. Give the law of falling bodies.

13. How far does a body fall in five seconds? How far in the fifth second?

14. Give the difference between the center of gravity and the center of magnitude.

15. Name the simple machines or mechanical powers.

16. Tell which of the simple machines are derived from the lever, which from the inclined plane.

17. Describe a lever of the first, second and third kind.

18. The base of an inclined plane is 10 feet, its height is 4 feet, what power will move a barrel of flour up such an inclined plane?

19. What is the law of the wheel and the axle?

20. The circumference of the axle is 20 inches, and the handle moves in a circle of 5 feet, what power must be applied to raise a bucket of water weighing 60 lbs., friction not to be taken into consideration?

VII. GERMAN.

Sprachlehre.

1. Declinire: Der treue Diener; eine neue Weste; das alte Kleid.
2. Bilde einen Satz, das Subject in der zweiten Person der Einzahl, das Prädikat ein Verb in der Seideseite, vergangene Zeit.
3. Bestimme das Prädikat des obigen Satzes näher durch einen Umstand des Ortes und einen Umstand der Zeit.
4. Setze den Satz nun in die thätige Form. In welchem Falle steht nun das persönliche Fürwort der zweiten Person und welches Satzglied ist es?
5. Schreibe einen Vers aus dem Gedächtnisse nieder und setze die Satzzeichen.

Aussatz.

1. Erzähle den Inhalt des Chamisso'schen Gedichtes „Abdallah“ mit eigenen Worten. (Eine halbe Seite.)

FIRST GRADE—DIVISION B.

I GRAMMAR.

1. Name the *principal* and the *subordinate* elements of a sentence.
2. Write the plural of *valley*, *lady*, *thief*, *analysis* and *it*.
3. Write two regular and two irregular verbs, and give their principal parts.
4. Write the opposite gender of *king*, *uncle*, *niece*, *hero* and *Englishman*.
5. Define relative and personal pronoun, and write a sentence containing a relative pronoun, and one containing a personal pronoun.
6. Compare late, old, little, dutiful.
7. Analyze: "When you sit or walk, throw back your shoulders and hold yourself erect."
8. Form a sentence containing an adjective clause with the relative pronoun in the objective case.
9. Write a sentence containing an objective clause, then change the verb of the principal clause to the passive voice and tell what element the subordinate clause will be.

10. Correct, giving reasons: "It was them who I saw this morning." "Either John or I were in the city last week." "Somebody is snapping their fingers." "There was five of us in the boat, and each of us done our best to keep him from setting in the bow."

II. HISTORY.

1. How long did the Revolutionary war last? Name three of the principal battles, three generals on each side and three distinguished American Statesmen of the Revolution.

2. When, and where was peace made, and what were the stipulations of the same?

3. Give a short account of the first President of the United States.

4. Tell what you know about the "Whisky Insurrection."

5. Give the important events of Jefferson's administration.

6. State what you know about Aaron Burr.

7. What war occurred during Madison's administration?

8. Tell the cause of this war, and give an account of the five naval engagements and the important battles on land, telling which party was victorious.

9. When, and where was peace concluded, and what did the United States gain thereby?

10. What were the causes of and who commanded the American forces in the war with Algiers?

III. ARITHMETIC.

1. Divide the sum of $5\frac{1}{2} + 3\frac{1}{5}$ by their difference.

2. Divide one hundred thousand one hundred eleven and eleven thousandths by ten thousand one and one-tenth.

3. By selling a house for \$5,790 the owner lost $3\frac{1}{2}$ per cent.; what did it cost?

4. A cow that cost me \$75, I sold for \$60 to a man who sold her for \$80. What per cent. did I lose, and what per cent. did he gain? (*Analysis required.*)

5. If I sell a horse for \$140 and lose 26 per cent, what should I have sold him for to gain 10 per cent.?

6. A wool dealer bought 375 T. 15 cwt. of wool at \$75 per ton and sold it again at a profit of 20 per cent.; what was his profit?

7. A broker receives \$3500 to invest in cotton at 8 cents per pound; if he charges $1\frac{1}{2}$ per cent. on the purchase, how many pounds of cotton does he buy?

8. A grocer sold 4 barrels of sugar for \$24 each ; on two he gained 20 per cent. and on the other two he lost 20 per cent.; did he gain or lose on the whole, and how much?

9. How much gold can be purchased for \$4181 in currency, when gold is quoted at 148 per cent. ?

10. Define stock, share, par value, above par and below par.

V. COMPOSITION.

Invitation to a friend who lives in the country, to spend the winter with you in the City. State the advantages of City life during the winter months, the various ways in which a person may gain instruction and amuse himself, etc.

VI. NATURAL SCIENCES.

1. Which class of animals do we call articulates, and why do we call them such?

2. How many incisions do we find in the bodies of insects, and what are the parts produced by these incisions called ?

3. How many parts have crustaceans and spiders ?

4. Of how many rings is the breast of an insect composed, and what appendages are found on those rings ?

5. Which organ is found in the head, breast and abdomen of insects ?

6. Name the parts of the mouth of a beetle.

7. Of how many joints is the leg of an insect composed ?

8. How many pairs of wings are found in different insects and where are they fastened ?

9. What is metamorphis ? When is it perfect ? When imperfect ?

10. How do beetles differ from lepidoptera ?

11. What is natural philosophy ?

12. Of what do we speak in mechanics ?

13. Name different kinds of motion.

14. What is a pendulum ?

15. How does the length of a pendulum compare with its vibration ? Give the law.

16. How long must a pendulum be in our latitude to vibrate seconds ?

17. Where do we find the pendulum applied ?

18. What may be gained with levers of the first, second and third kind, and in what proportion ?

19. What is a compensation-pendulum and how is it constructed?

20. Give the kinds of pulleys and tell in what respect they differ.

VII. GEOGRAPHY.

1. Which are the principal occupations of the people of the United States? Tell where these occupations can be most successfully carried on.

2. Name the New England States and their capitals also the principal rivers.

3. Name and locate the principal commercial cities of the New England States.

4. Draw a map of Connecticut.

5. Name the Middle Atlantic States and their capitals, also their principal rivers and mountains.

6. Name and locate the principal commercial cities of this groupe.

7. Name the South Atlantic and Gulf States and their capitals, also their principal rivers.

8. Describe Texas, giving its boundary, mountains, rivers and productions.

9. Name the Western (Central) States and their capitals, also their principal rivers.

10. Draw a map of the State of Ohio, indicating its rivers and cities.

VIII. GERMAN.

Sprachlehre.

1. Gib die erste Person der Einzahl durch alle Zeitformen von zählen und schreiben.

2. Drücke die folgenden Sätze in der Leideform aus: „Müßiggang führt Krankheit herbei und verkürzt unser Leben, weil er uns schwächlich macht.“

3. Schreibe die folgende Sätze in der Vergangenheit nieder: „Dieser kennt den Juden als einen ehrlichen Mann, und erbietet sich, ihm den Betrag des Geldes zu borgen. Der arme Isaaak dankt herzlich für dieses Vertrauen und trägt die Kleider nach Hause. Hier untersucht er nochmals, was daraus zu lösen sein mag. Indem er das Paar Beinkleider genau ansieht, fühlt er zwischen dem Oberzeuge und dem Futter etwas Hartes. Er löst das Futter ab, und siehe es sind drei Goldstücke, die durch ein Loch in der Tasche heruntergefallen sind.“

4. Schreibe einen Vers aus dem Gedächtnisse nieder.

Während d.. Sommer bleibt die Schule geschlossen.

Wir essen mit d.. Messer und d.. Gabel.

Mit d.. Hut in d.. Sand kommt man durch d.. ganze Land.

Auffag.

Warum geht man in die Schule?

SECOND GRADE

I. GRAMMAR.

1. Give all the rules for the formation of the plural number of nouns, illustrating by examples.
2. Name all the elements a sentence may have and classify them.
3. How is the possessive case of nouns formed?
4. Write the possessive case, plural number of child, woman, farmer, church.
5. Distinguish between an adverbial and an adjective element.
6. Write a sentence containing an adverbial element of manner, of time, and of place.
7. Write a sentence in which the subject is modified by an adjective element and the predicate by a double object.
8. Analyze: "In the midst of all this confusion, the master of the ship with calmness and decision, gave his orders and brought the vessel uninjured into the harbor."
9. Write a sentence modifying the subject by an adjective element consisting of a noun in the possessive case, the predicate in the passive voice modified by an adverbial element of cause.
10. Correct, if necessary, the following sentences: "I had ought to have went and seen him before." "There was only three of us present." "Each of them have seen it."

II. HISTORY.

1. When, where and by whom was Virginia settled? Massachusetts? New York?
2. Give a short account of the French and Indian War, stating when it began, its causes and when peace was made.
3. What did Great Britain gain by the treaty of Paris?
4. What were the principal causes of the American Revolution?
5. Give an account of the battle of Lexington.
6. When did the "First Continental Congress" convene and what did it do?
7. When were the Articles of Confederation adopted by congress? When did they go into effect?
8. Tell all you can about the closing battle of the Revolution.

9. When and where was peace made and what did the United States gain thereby.

10. When did the constitution of the United States go into effect?

III. DICTATION.

Printing in its simplest form is known to have been practised more than three thousand years ago. That is, the names of makers and owners were stamped upon various articles; and cattle, sheep and other animals were branded with some mark to designate their owners. Seals, signet rings and stamps with carved inscriptions were employed by the Assyrians, Israelites and Romans to make impressions upon soft substances which afterward became hard; and the Chinese and Japanese printed books from blocks, upon which words were engraved, many hundred years before the Christian era.

IV. ARITHMETIC.

3½

1. From $\frac{7}{2\frac{1}{2}}$ take the quotient of $7\frac{1}{2} \div 9$.

11½

2. Find the G. C. D. of 48, 64, 76, 92.

3. Find the L. C. D. of 10, 45, 75, 90.

4. How many times can a bottle holding $\frac{1}{4}$ of $\frac{3}{4}$ of a gallon, be filled from a demijohn containing $\frac{1}{4}$ of $1\frac{1}{2}$ gallons?

5. A merchant tailor has $67\frac{2}{3}$ yards of cloth, from which he wishes to cut an equal number of coats, pants and vests; how many can he cut if they contain $3\frac{1}{2}$, $2\frac{1}{2}$ and $1\frac{1}{2}$ yds. respectively? (*Analysis required.*)

6. Find the sum of the following product: 27 hundredths by 6 tenths, 49 hundredths by 8 hundredths, 78 hundredths by 7 and 8 hundredths, 700 by 7 hundredths, 735 by 14 hundredthousandths.

7. What is the price of a pile of wood 128 feet long, 78 feet 9 inches wide and 6 feet 3 inches high, at \$6.25 per cord?

8. The largest of the Egyptian pyramids measures 763.4 feet on each side of its base. How many acres does it cover?

9. What must be paid for transporting 31640 pounds of railroad iron from Philadelphia to Richmond, at \$3.05 per ton?

10. From a farm of 149 acres, 3 square rods, the owner sold a field 31 rods long and 30 rods wide. How much land did he sell and how much did he have left?

V. GEOGRAPHY.

1. Draw an outline map of Africa, locating the principal capes and rivers.
2. Describe the principal mountain chains of Africa.
3. Locate Cairo, Monrovia, Capetown, Zanzibar, Tunis.
4. Name the mountain chains of Asia from the Caspian Sea to Behring Strait.
5. Name the peninsulas of Asia, telling into what waters they project.
6. Describe the principal rivers of Asia.
7. Tell what you know about the nations of the two peninsulas of Asia extending into the Indian Ocean, also their animals and vegetation.
8. Bound Europe
9. Name the countries of Europe and their capitals, locating them.
10. What separates Great Britain from the continent of Europe? What separates Ireland from Great Britain?

VI. NATURAL SCIENCES.

(Same questions as in Third Grade.)

VII. COMPOSITION.

Give the pupils a *leaf* and let them describe it.

VIII. GERMAN.

Rechtschreibprobe.

Bei einem Wirthe, wundermild,
Da war ich jüngst zu Gaste;
Ein goldner Apfel war sein Schild
An einem langen Aste.

Es war der gute Apfelbaum,
Bei dem ich eingekohret;
Mit süßer Kost und frischem Schaum
Hat er mich wohl genöhret.

Es kamen in sein grünes Haus
Viel leicht beschwingte Gäste;
Die sprangen frei und hielten Schmaus
Und saßen auf das Beste.

Sprachlehre.

1. Gib Geschlecht und Zahl der Dingwörter in dem Obigen.
2. Deklinire in der Einzahl und Mehrzahl: Der Wirthe, das Haus, die Bank.
3. Nenne die Adjective in dem Obigen.

4. Erzähle die folgende Geschichte in der dritten Person: „Als ich einst mit meinen Feinden in Krieg verwickelt war, kam ich eines Tages so sehr ins Gedränge, daß ich mich vor meinen Feinden in den halbzerfallenen Mauern eines alten Gebäudes verbergen mußte. Jeden Augenblick konnte ich entdeckt werden und meinen Feinden in die Hände fallen. Wurde mein Heer geschlagen, so waren alle meine bisherigen Bemühungen umsonst, und ich konnte sehr leicht mein Reich und selbst das Leben verlieren.“

5. Erweitere das Subject in dem folgenden Satz durch ein Adjectiv und ein Hauptwort im zweiten Falle:

„Die Schuhe sind zerrissen.“

6. Bilde einen Satz, in dem das Prädikat durch ein Adverb näher bestimmt ist.

THIRD GRADE

I. DICTATION.

A well-bred person does everything with perfect ease and quietness. He allows nothing to ruffle his temper. He enters a room quietly, though not stealthily. He sits down or rises quietly, speaks with gentleness, and does every thing in a way fitted to please. An ill-bred person enters a room noisily, and sits down and rises noisily. It would seem as if he could do nothing quietly. When he speaks, the house rings with his voice; when he walks, every tramp of his foot makes the room shake.

II. GRAMMAR.

1. Give as complete a rule for the formation of the plural of nouns as you can, illustrating by examples.

2. Write the possessive case plural number of lady, wife, son-in-law, Englishman.

3. Give the principal parts of the verbs in the following:

A wood-sawyer stood near the street as they passed,
The carriage and couple he eyed,
And said, as he worked his saw on a log,
“I wish, I was rich and could ride.”

4. Tell the mode and tense, and name the subject of each verb in the above.

5. What parts of speech are the following words: into, upon, beneath, within, over, under? Employ each one of them in a sentence.

6. Rewrite the following paragraph, placing all the verbs into the active voice:

John was called by the teacher to bring up his copy-book. “By whom was this book daubed and smeared?” was demanded by the teacher. “The blot was made by

George Finch," was John's answer. „Then George ought to be punished," the teacher replied.

7. Rewrite the following paragraph, changing all the subjects to the third person :

On a rainy evening, as I was alone in my chamber, I took up my flute, and commenced playing a tune. In a few minutes my attention was directed to a mouse, that I saw creeping from its hole and advancing to the chair in which I was sitting. I ceased playing, and it suddenly ran back to its hole. I began again shortly afterwards, and was much surprised to see it return and take its old position. I ceased playing, and it instantly disappeared again. This experiment I frequently repeated with the same success.

8. Write the opposite gender of nephew, aunt, lad, belle, bride.

9. Correct the following: Jane and I was in St. Louis yesterday. It was me who you saw in the street. Every one must have their sentences correct.

III. ARITHMETIC.

(To be solved orally.)

1. $\frac{7}{5}$ of 45 is $\frac{2}{3}$ of what number ?
2. $48 : 64 :: x : 72$.
3. How many proper fractions, whose denominator is 8, can you give ? Give the smallest of them.
4. Bought $9\frac{3}{5}$ yards of cloth at \$5 a yard, and paid for it with land at \$7 an acre, how many acres must I give ?
5. $7 : 4 :: 84 : x$

(On Paper.)

1. What number multiplied by 72,084 will produce 5,190,048 ?
2. Two men start from different places, distant 198 miles, and travel toward each other ; one goes 4 miles, and the other 5 miles an hour ; in how many hours will they meet ?
3. A cistern whose capacity is 840 gallons has two pipes ; through one pipe 60 gallons run into it in an hour, and through the other 39 gallons run out in the same time ; in how many hours will the cistern be filled ? (*Analysis required*)
4. Define division, dividend, divisor, quotient.
5. What are the common prime factors of 168 and 672 ?
6. From 1000 dollars take 3 cents 7 mills.

7. A man bought 150 acres of land for \$3975; he afterwards sold 80 acres of it at \$32.50 an acre, and the remainder at \$34.25 an acre; how much did he gain or lose by the transaction?

8. A man bought 4 yards of cloth at \$3.20 a yard, and 37 pounds of sugar at \$0.08 a pound; he paid \$6.80 in cash, and the remainder in butter at \$0.16 a pound; how many pounds of butter it take?

9. Divide 126,000 by 840.

10. What is the amount of the following bill?

St. Louis, June 21, 1875.

James Cooper & Bro.,

To E. C. Lackland, Dr.

To 37 bbls Flour Ex @	\$4.50.
To 23 " " Fy @	5.25.
To 25 " Green Apples @	2.124.
To 14 boxes Raisins @	7.50.
To 5 boxes Lemons @	4.75.

(Bill to be copied and amounts to be carried out and added.)

IV. NATURAL SCIENCES.

1. In how many, and in what ways may heat be generated? State how heat may be generated by chemical change.

2. What effect has heat upon solids?

3. How would you show that heat expands fluids?

4. Upon what is the construction of the thermometer based?

5. When, and by whom was the thermometer invented?

6. Name some practical application of the expansion of solids by heat.

8. How would you show that heat creates currents in water?

9. Why are tall chimneys needed where much heat is required?

10. What is the cause of winds?

11. Give the peculiarity of the incisors of the rabbit.

12. Is the lizard useful or injurious? if so, in what way?

13. In what respects are a butterfly and a moth similar? in what respects dissimilar?

14. In what respects are a butterfly and a beetle similar?

15. Have the moth and crawfish any points of resemblance? if so, what are they?

16. Name some peculiarities of the rabbit.

17. In which way is the herring useful to men?

18. Tell which of the following animals are useful, and which are injurious to man: woodpecker, snipe, lizard, herring, beetle, butterfly, moth, crawfish?

19. Describe the turnus butterfly.

20. Give the transformation or metamorphosis of a butterfly

21. Name the parts of a common leaf.

22. Name the kinds of margins.

23. Name the leaf forms.

24. Name the parts of the stem.

25. Name the different kinds of roots and describe each.

V. HISTORY.

1. Tell what you know about Columbus and the discovery of the continent?

2. Give an account of Ponce de Leon and his discovery.

3. State what you know about Sir Humphry Gilbert's and Sir Walter Raleigh's attempts at settlement in this country.

4. What two companies received charters from the English crown? What extent of territory was granted to each?

5. Relate what you know about the settlement of Jamestown?

6. When, where, by whom, and under what circumstances was Rhode Island settled?

7. Give a short account of the settlement of New Netherland.

8. Who were the pilgrims, and what did they do, before they sailed for the new world?

9. Give an account of King Philip's war?

10. How came New Netherland to be called New York? Give date of this event.

VI. GEOGRAPHY.

1. Name the principal capes of South America and tell into what waters they project?

2. Describe the three principal rivers of South America.

3. Describe the Andes mountain system.

4. Where are the cultivated lands of South America and what do they produce?

5. Draw an outline map of South America.

6. Name the countries of North America.

7. Name the peninsulas of North America.

8. Of what regions does North America consist?

9. Where are the principal islands of North America and what waters do they border?

10. Locate three principal cities in British America, three in the United States and three in Mexico.

VII. COMPOSITION.

Give the pupils an insect, let them examine and then describe it.

VIII. GERMAN.

Rechtschreibprobe.

Das Rothschwänzchen wollte gern ein Nest bauen. Es flog im Garten umher und um das ganze Haus herum, konnte aber kein hierzu passendes Plätzchen finden. Endlich sah es eine Ritze in der Mauer, und da es fand daß sie weit genug war, sagte es zu seinem Männchen. Komm, wir wollen Heuhälchen suchen und unser Nestchen bauen. Schließlich gingen sie an die Arbeit und in kurzer Zeit war das Nestchen fertig.

Sprachlehre.

1. Setze die Dingwörter in den obigen Sätzen in die Mehrzahl mit dem bestimmten Artikel.
2. Setze die Zeitwörter (verbs) in den obigen Sätzen in die gegenwärtige Zeit.
3. Schreibe die Adjective in den obigen Sätzen nieder. Steigere artig, alt, hoch.
4. Schreibe die persönlichen Fürwörter, die hinweisenden Fürwörter und die bezüglichen Fürwörter nieder.
5. Bilde einen Erzählssatz und verwandele ihn in einen Fragesatz. Bilde auch einen Befehlssatz.
6. Erweitere das Subjekt in den folgenden Sätzen durch ein beigefügtes Adjectiv: Der Schüler muß gestraft werden. Das Haus ist eingestürzt. Die Tasse ist zerbrochen.

FOURTH GRADE.

I. DICTATION.

Our country — the United States — is so vast, with a length from east to west of nearly twenty-seven hundred miles, and a breadth from north to south of about sixteen hundred miles — that there is not a day in the year, when the weather is the same to all of us. But the great size of our country is not the only reason for this difference. Our land is washed on the east by an ocean; on the south by a gulf, or sea; on the west by an ocean and on the north by great lakes. We have many rivers and brooks; many mountains, hills, plains and valleys — large forests and prairies. All these affect the weather.

II. LANGUAGE.

1. Write the following sentences in the plural number: "A holiday is a day for recreation." "A berry grows on a brier." "A Frenchman is a native of France." "The shelf is too long."

2. When do nouns ending in "y" add "s" to form the plural? Give two examples.

3. What other rule for forming the plural of nouns ending in "y"?

4. With "Julia" for the subject, write a good sentence, modifying the predicate by words telling when and where. Draw a line under the predicate.

4. Write the predicates in the following paragraph in the present tense: "A man was walking through the streets of a city. He saw a boy with a number of small birds for sale in a cage. He looked with sadness upon the little prisoners flying about the cage, peeping through the wires, and trying to get out. He stood for some time, looking at the birds. At last he said to the boy: 'How much do you ask for your birds?' 'Fifty cents a piece, sir,' said the boy."

6. Rewrite the following, placing the predicates in the passive voice: "The farmer raises wheat, corn, fruit and many other things." "He sells the produce of his farm in the city." "He takes wheat and corn to the nearest mill."

7. Place the subject of the following sentences into the singular number: "They wrote their lessons very carefully." "These children are very anxious to be promoted to a higher grade."

8. Write a sentence using the verb "see" in the past time. Change it to a question in present time.

9. Write a letter to one of your schoolmates, telling him (her) of a day you spent in the country. Tell in what way you *went* to the country, whom and what you saw there, how you amused yourself, and how you returned home.

10. Correct all mistakes in the following sentences: "Mary set on a chair." "The books laid on the table." "I never done it."

III. ARITHMETIC.

(To be solved orally.)

- 39 is 19 less what number?
- The less number is 28, the difference 15, what is the sum?
- Bought 9 leadpencils at 7 cents a piece and 5

primers at 13 cents a piece; what cost more and how much?

4. $8 \times 4 + 3 \div 7 \times 9 \times 2 \div 3 - 6 \times 4 + 4 \div 5$.

5. $\frac{8}{7}$ of 49 is $\frac{1}{5}$ of what number?

6. $\frac{1}{5}$ of 30 + $\frac{1}{3}$ of 72 are how many times 3?

7. What part of the dividend is the quotient, when then the divisor is 9?

8. $\frac{2}{3}$ of 90 \div $\frac{1}{5}$ of 30 = ?

9. How many yards of silk at 12 dimes a yard, must be given for 18 bushels of apples at 8 dimes a bushel?

10. If 8 men can do a piece of work in 12 days, how many days would it take 6 men to do the same?

(On Paper.)

1. Define subtraction, minuend, subtrahend, difference, sum.

2. To a certain number 703,063 were added and the sum was 2,000,000, what was the number?

3. In a kiln there were 365,000 bricks. The owner sold to one builder 38,640; to another for each of three houses 90,440; the remainder was divided among 4 men; how many did each receive?

4. $961 \times 324 + 33,749 - 8,963 \div 9 = ?$

5. Bought 27 barrels of molasses each measuring 52 gallons; there had leaked out of each barrel 5 gallons; the molasses was worth 65 cents per gallon, required the cost of the molasses.

6. A boat is worth 9,836 dollars, this is one seventh of the value of the cargo, what is the value of both?

7. $4,736 + (4,321 - 2,964) - 1,938 = ?$

8. Divide the sum of two thousand one hundred twenty-nine, seventeen thousand two hundred thirty-six, twelve thousand five hundred, seven thousand two hundred forty-seven multiplied by 72, by 8.

9. Copy the following bill, carry out the cost of the several articles named and find the amount of the bill.

Belleville, June 21, 1875.

James Thompson.

Bought of O. N. Park.

37 bushels of Apples, @	95 cts.
553 " " Potatoes, @	75 cts.
49 pounds " Coffee, @	34 cts.
94 " " Ham, @	18 cts.
92 " " Nails, @	8 cts.

10. For 12 acres of land I received \$1800. The cost was \$1500. What was the gain or loss per acre?

IV. GEOGRAPHY.

1. What motions has the earth, and what does each cause?
2. Which hemisphere has more land, the eastern or the western? Name the parts of the world on each.
3. Define coast, cape, promontory, isthmus.
4. Name the five oceans of the earth in the order of their size and bound them.
5. Describe a lake, naming and defining its parts.
6. What do you understand by river system? What by watershed?
7. Name and describe the five zones of the earth.
8. Name the materials the earth produces and what occupations of man they call forth.
9. Name the principal tributaries of the Mississippi River, telling where they flow.
10. Locate: Isthmus of Panama, Hudson Bay, Cuba, Caribbean Sea, Florida.

V. COMPOSITION.

Wants of men.

VI. GERMAN.

Rechtschreibprobe.

Der guten und nützlichen Kuh verdanken wir Milch, Butter und Käse. Ihr Fleisch ist sehr schmackhaft aber nicht so kräftig, wie das Fleisch der Dohsen. Ihre Haut gibt ein gutes Leder und ihre Hörner werden vom Drechsler zu allerlei Geräthen benutzt. Selbst ihre Knochen können verbrannt werden und geben dann eine schwarze Farbe ab.

Sprachlehre.

1. Welches sind die Dingwörter in den obigen Sätzen?
2. Setze das bestimmte Geschlechtswort vor die folgenden Dingwörter: Hut, Mensch, Kalb, Bank, Spiel, Schüssel, Thier, Nagel, Ente.
3. Setze diese Dingwörter in die Mehrzahl.
4. Welches sind die Zeitwörter (verbs) in den obigen Sätzen?
5. Vervollständige die folgenden Sätze: Die Rose ist schön... als die Tulpe; sie ist die schön... Blume. Karl ist jung... als sein Bruder; er ist der jung... der Familie. Dieser Schüler ist aufmerksam... als jener.

FIFTH GRADE.

I. NUMBERS.

(To be solved orally.)

1. $7 \times 4 = 12$ $5 = 9 + 14$ $6 = 13 + 5$ are how many eights?
2. $4 \times 8 \times 2 + 6 + 14 = 25 - 5 \div 3 = ?$

3. $105 - (8 - 9) = ?$
4. $18 \times 45 = ?$
5. $5 \times 7 + 6 + 7 - 12 - 12 - 4 + 50 + 26 - 8 - 8 - 8 =$ how many nines?
6. In how many ways can 84 be obtained by multiplication, and which are they?
7. Find the cost of 7 primers at 15 cents a piece, and 8 leadpencils at 11 cents a piece.
8. If one yard of muslin costs 67 cents, what will 14 yards cost?
9. What is the sum of the square of 13 and the square of 15?
10. James was sent to market to buy 8 turkeys and 12 ducks, the turkeys cost 14 dimes, and the ducks 6 dimes a piece; what was the whole cost?

(On Paper.)

1. Define numeration and notation.
2. What stands in the tenth place? In the sixth period?
3. Write in figures and add: Twenty million one hundred thirty thousand seventy-five, Nine million sixty-five thousand nine hundred seventy, Seven hundred twenty-nine thousand six, Three hundred eighty three million eighty-one thousand six hundred four, Eighty-eight million six hundred seventy-four thousand seven hundred, Forty million four thousand forty, Nine hundred nine thousand ninety-three.
4. Write in words: 403,061,904 and 12,408,060.
5. What is multiplication? What is the multiplicand? What is the multiplier? What is the product? What does it mean to square a number?
6. Multiply the sum of 13,409, 174,316, 349, 17,248, 164,093, 6,830, 12,519 by 248.
7. Bought 74 horses at \$65 a piece, 93 cows at \$39 a piece, 94 hogs at \$16 a piece and 294 sheep at \$4 a piece how much did they all cost?
8. $37,000 \times 6,800 = ?$
9. What is the cost of 48 boxes of tea, each containing 75 pounds, at 60 cents a pound?
10. If one of the leaves of your copy book is 8 inches long and 6 inches wide, how many square inches on one side of it? On both sides? How many square inches of surface on the twelve leaves? (*Write out the Analysis.*)

II. DICTATION.

Our uncle Robert came to us, and invited us to dinner. He promised to give us a pudding, the materials of which had employed more than a thousand men.

“A pudding that has taken a thousand men to make !
Then it must be as large as a church.”

Scarcely had we taken our breakfast the next day, when we prepared to go to our uncle's house. When we arrived there, we were surprised to find everything as calm and quiet as usual.

III. LANGUAGE.

1. Take the sentence, “Mary sang.” and join to it a word or words which shall tell *where* and *when* and *how* and *what* she sang. (There may be four sentences, if necessary.)

2. Write five namewords selected from what you have written, two proper and three common.

3. Write a sentence containing the words “in the evening” and change it to an asking sentence.

4. Write three sentences, the first containing the qualityword “happy” in the positive degree, the second containing it in the comparative degree, and the third containing it in the superlative degree.

5. Compare “high.” “good.” “attentive.”

6. Write a letter to your teacher requesting her to excuse you from attending school on Thursday next week, because your parents wish to take you along on a visit to your grandparents.

7. Write the following sentences in the plural number: “That monkey is very cunning.” “A fly is an insect.” “This mouse hid in its hole.”

8. Change to the singular number: “Some children cry at every thing.” “Those geese fly northward.”

9. Correct: “James never seen them boys before.”

10. Correct: “Sally and me was in the kitchen.”

IV. GEOGRAPHY.

1. Draw a map of St. Clair County.

2. Bound St. Clair County.

3. Describe the course of the Kaskaskia River and name two Creeks flowing into it.

4. Tell what you know about its capital and its principal towns.

5. Name the principal productions of St. Clair County.

6. Define baseline, range and township.

7. Bound the State of Illinois.

8. Give the principal rivers of the State, their source, course and mouth.

9. What railroad would you take and through what

principal cities would you pass in going from Cairo to Chicago? From East St. Louis to Vincennes?

10) Draw a map of the State, locating the capital, Rock Island, Alton, Belleville, Kaskaskia, Cairo and Chicago.

V. GERMAN.

Rechtschreibprobe.

Weizen, Korn, Roggen, Gerste und Haber sind Feldfrüchte. Viele Bäche bilden einen Fluß oder Strom und dieser fließt in einen See oder in das Meer. Der Käfer, die Spinne, die Ameise, die Biene und der Schmetterling sind Insekten: einige davon haben Flügel, andere nicht. Der Hecht, die Forelle, der Heißfisch, der Gründling und der Aal sind Fische; sie haben Kiemen und atmen durch Kiemen.

SIXTH GRADE

I. DICTATION.

Some boys and girls are easily frightened. If they see a slug or a worm in the garden, they run and scream. When they are out in the pastures, they are afraid of the sheep, the horses and the cows, and in the yard, even the turkeys and the geese frighten them.

II. NUMBERS.

1. $5 + 9 \times 2 - 7 - 7 - 7 \times 5 + 9 + 6 \times 2 - 6 - 6 - 6 = ?$

2. $66 + 67 + 68 = ?$

3. $100 - 7 - 7 - 7 - 7 - 6 - 8 - 9 - 3 = ?$

4. $7 \times 57 = ?$

5. If one pencil costs 7 cts. what will 9 pencils cost?

6. Find the square of 18.

7. Write in words 308,047.

8. Write in figures and add: Two thousand seven-teen, thirty-one thousand forty, seven hundred sixty-eight, nine thousand three hundred nine, sixty thousand nine hundred, three thousand eighty-seven, seven thousand eight hundred eight, nineteen thousand forty-eight.

9. Find the sum of 4,316, 7,904, 16,008, 1,311, 9,440, 708, 930, 1,349, 20,818, 30,030.

10. $1,407 \times 18$.

III. OBJECT LESSONS.

1. In what direction does Main Street run? Richland Street? Jackson Street?

2. What is an island? A peninsula?
3. Name the parts of a mountain, of a river.
4. Through what streets must you pass and in what direction must you go from the schoolhouse to the post-office?
5. Name the railroads leading to Belleville, and tell in what part of the city the several railroad depots are.
6. Name some useful animals, some that are hurtful.
7. Name articles made of leather, some made of silk, some made of paper.
8. Name some qualities of coal, of snow, of water, of iron.
9. Name five tools and tell who uses them.
10. Name five mechanics and tell what materials they work in.
11. What are amphibious animals? Name some.
12. What qualities must a good scholar have? What qualities should he not have?

VIII. GERMAN.

Schreibprobe.

Reifes Obst ist gesund. Der Pfeil ist spitz. Er schlägt mich mit der Faust. Diese Bäume hängen voll Birnen. Gute Schüler halten ihre Bücher rein.

Wie macht man den Selltaut lang? Wie kurz?

SEVENTH GRADE.

I. DICTATION.

Mary gave a cent to the beggar. What will a pair of boots cost? Wheat is ground into flour. The horses and cows are in the stable. Lucy has a little lamb. Henry was sent to market by his father.

II. NUMBERS.

1. $4 + 4 + 4 + 4 + 6 + 6 + 6 + 6 + 8$ are how many?
2. $7 + 7 + 7 + 7 + 4 + 4 + 5 + 5 + 9 - 5$ are how many tens?
3. $14 - 16 + 18$ are how many?
4. 4 fours and 6 threes are how many?
5. Eight threes are how many fours? Six fives are how many sixes?
6. Count by fours beginning with two.
7. Count by sixes backward from 72.
8. $4 \times 9 = ?$ $4 \div 7 = ?$ $3 \times 8 = ?$ $5 \div 7 = ?$ $6 \div 8 = ?$ $3 \times 7 = ?$

$=? 4 \times 4 + 6 = ? 5 \times 6 + 2$ are how many fours? $5 \times 5 + 3$ are how many sevens?

9. Write in figures and add; 36, 19, 34, 9, 17, 49, 12, 25.

10. Write in figures and add: 104, 120, 207, 80, 39, 140.

III. OBJECT LESSONS.

Name the parts of a book.

Tell all you know about a tree.

What is the roof? the branch? the wing? the skin?

Name the parts of the head.

Tell all you know about a butterfly.

What is the spider?

Tell all you know about the frog.

IV. GERMAN.

Schreiblesenunterricht.

Eine Woche hat sieben Tage. Der Stuhl hat eine Lehne. Meine Mühle geht. Die Rose ist eine Blume. Das Haus ist hoch.

EIGHTH GRADE

I. NUMBERS.

1. $2 + 3 + 4 + 1 + 4$ are how many.
2. $3 + 4 + 1 + 2 + 5$ are how many.
3. 5 twos = how many ones?
4. 4 threes = how many ones?
5. 4 twos are how many fours?
6. 3 and how many are ten?
7. 10 are how many twos? how many threes?
8. 9 are how many threes? how many twos? fours?
9. Count by twos; count by twos beginning with one.
10. Write ten, thirteen, sixteen, nineteen.

II. DICTATION.

Jane made us a nice cake. He had a kite. We can make a fire. The sheep fed on grass. The rope is long. A mule can run. Five men gave me a dime.

III. OBJECT LESSONS.

Name the parts of the body.

Name four kinds of fruit growing on trees.

Name three kinds of grain.

Name the parts of a tree.

IV. GERMAN.

Nenne die Gegenstände im Schulzimmer; die Theile des Baumes, des Apfels, des Stuhles, des Pferdes. Was thut die Gans? Beschreibe die Kuh, den Hahn, die Winterlandschaft.

EXAMINATION IN MUSIC.

I. GRADE AND CLASSES OF HIGH SCHOOL.

(G на Foy.т.не.)

1)

II. GRADE.

1)

III. GRADE.

1)

EXAMINATION IN MUSIC.

IV. GRADE.

QUESTIONS.—How many Tones in the Scale? 2. What are the Principal Tones? 3. How many Tones have you had? 4. What is Pitch? 5. By what represented? 6. Of what is the Staff composed? 7. What is the meaning of *f*, *p*, *f*, *pp*, *D.C.*?

V. GRADE.

QUESTIONS.—1. What are Bars? 2. What is the use of the Double Bar? 3. How many kinds of Measure do you know? 4. What are their names? 5. What is the Measure with Two, Three, Four Parts called? 6. What is called Pitch of Tones? 7. By what is the Pitch of Tones shown? 8. How many Lines and Spaces has the Staff? 9. What is the meaning of *p* and *f*?

VI. GRADE.

QUESTIONS.—1. How many kinds of Tones did you have? 2. How are Tones written? 3. How many kinds of Rests do you know? 4. What is the use of Rests? 5. How many kinds of Notes do you know?

Course of Study.

EIGHTH GRADE.--FIRST YEAR.

FIRST QUARTER.

During the first quarter the pupils are to be taught the proper school-discipline; their attention is to be awakened so that they may understand and execute promptly all the commands of the teacher; **willing** obedience, neatness, cleanliness and punctuality are to be made the prime object at this stage.

Preparatory to **READING** the pupils shall after the things represented by the words are spoken of, be required to *analyze* the words into their elementary sounds, also to *combine* elementary sounds into words. The following words are to be analyzed during this quarter: *eel, ear, oak, arm, meal, saw, ice, kite, rope, mouse, nest, oil, mill, egg, cow, shoe, babe, door, face, hook, veil, water, sheep.* Let the pupils distinguish between *sing sounds* and *consonants*.

Preparatory to **WRITING** the pupils are to draw on their slates vertical, horizontal and oblique lines at equal distances, ovals, the teeth of a saw, ropes coiled, &c. (Attention is to be paid to the proper position of the pupils and the holding of the pencil which should always be long and sharp; during these preliminary writing exercises the pupils should draw no more than the teacher tells them to, and all the principles should be large and bold; no scribbling of whatever kind is to be permitted). **NUMBER** as far as four, with all possible integral combinations, addition, subtraction, multiplication and division, as laid down in course of study for number. (Not more than 15 minutes daily.) **CONVERSATION** about objects found in the school room, the parlor, the bed-room, the kitchen, the cellar, the street, the garden, the woods, so that the children can name them readily in full sentences. The idea of right and left, above and below, before and after etc., to be developed and practised to perfection. (Care must be taken by the teacher to correct all faulty expressions and to pro-

note clearness of pronunciation). **DRAWING** of the objects spoken of according to nature and from copies made by the teacher as far as the objects will permit. **The SINGING** of easy songs and the cultivation of the ear and voice, so as to distinguish long and short, high and low, loud and soft sounds.

In **GERMAN** the pupils are to name the objects in the schoolroom, the parlor, bed-room, etc., first alone then in groups as they belong together, always in complete sentences (Particular attention must also here be paid to correct utterance of the elementary sounds.) **RECITAL** of pieces of poetry both in English and German with correct expression and emphasis.

SECOND QUARTER.

READING: Representation of the elementary sounds by script letters: first a, e, o, with the consonants m, n, r, s, z, f, l, h by dictation exercises; then ee, oo, aw.

WRITING of the letters learned in five spaces, according to lines ruled on the slate with a sharp instrument; particular drill in the seven elements of the small letters; the pupils must be made to analyze the letters into their principles so as to form the letters; when the letters are written on the board, the pupils are to be led to criticize.

NUMBER to *six* in all integral combinations in the four fundamental rules as laid down in syllabus for first instruction in number.

CONVERSATION about the parts of the body, the garments we wear, the different mechanics, the tools they work with, the materials they use, etc., to promote the use of correct language.

DRAWING, SINGING and the **RECITAL** of pieces in prose and verse continued.

GERMAN: The naming of objects continued with the *indefinite article*: parts of the body, garments, mechanics, tools, etc.

THIRD QUARTER.

READING: Representation of all the long and short vowel sounds and the diphthongs i, (y,) oi, (oy,) ou, (ow,) and u, (ew,) and all the consonant sounds except *wh* in simple combinations. (The vowel is long at the end of a syllable, and short when followed by a consonant: e before e, i, y = s; the use of silent e. Dic-

tation exercises with reading of what the teacher writes on the board or the pupils on their slates.

WRITING the letters as far as learned.

NUMBER to *eight*.

CONVERSATION about vegetables, trees, flowers; then mammals and birds, both domestic and wild. (If possible, the objects should be exhibited to the view, also the most prominent characteristics pointed out by the pupils.)

GERMAN: The naming and grouping of objects continued with the use of the *definite* article. Same objects always spoken of as in conversation in English.

DRAWING, SINGING AND THE RECITAL of pieces in prose and verse continued, also a few simple songs with German words taught.

FOURTH QUARTER.

READING: Introduction to the Primer; Knell & Jones' Phonic Reader to Lesson X inclusive; names of the letters; frequent dictation exercises and copying of the reading lesson from memory.

WRITING all the small letters and the capitals A, H, I, M, S, T and W.

SPELLING: Syllabication of simple words of two syllables and spelling by sound, then by name, then written on the board, so that correct pictures of words may be learned; no words except such as are spelled according to above given rules to be written.

NUMBER to *ten*; counting objects to twenty. Figures to be learned and tables to be written large and distinctly. Particular attention must be paid to the formation of the figures and each lesson in **NUMBER** should be a lesson in **PENMANSHIP**.

CONVERSATION about plants, agricultural implements, forest trees, reptiles, fishes, insects and mollusks, the most conspicuous parts of animals and plants, atmospheric phenomena and the heavenly bodies.

IN GERMAN, the same objects as above mentioned spoken of in sentences involving the use of prepositions in which the pupils are to be most carefully drilled.

SINGING, DRAWING AND THE RECITAL of pieces in prose and verse to be continued.

(Twelve little songs must be taught the pupils during the year.)

SEVENTH GRADE.--SECOND YEAR.

FIRST QUARTER

READING : Knell & Jones' Phonic Reader to Lesson XVIII, and McGuffey's First Reader to page 25. It is not sufficient that the pupils learn to read the lessons mechanically; the sentences must be discussed as to their contents and the pupils should be questioned (who did this? what did he do? etc.) on the same so as to awaken their understanding, that the book may be thoroughly mastered and the pupils *feel* that even the least word has a meaning. Pupils should also be taught how to study a lesson silently.

SPELLING : All the words occurring in the Reader or in Object Lessons must be spelled orally and in writing and frequent dictation exercises given on the same.

NUMBER to twenty. Decimal system introduced, tens' and units' place. (Time not to exceed 20 minutes per day.)

WRITING : Daily drill on the principles of the small letters and the necessary capitals occurring in the reading and dictation exercises, that the pupils may understand at once that the beginning of sentence and the names of persons begin with a capital letter.

CONVERSATION about "Parts of Objects," furniture, the room, garments, tools, etc. As new words occur, they should be spelled by the pupils and written, so as to impress themselves on their memory.

GERMAN. Object Lessons continued and easy words analyzed into their elementary sounds and script letters for the same taught.

DRAWING. Kruesi's Synthetic Course, first four pages of Drawing Book No. 1, according to copies placed on the black board by the teacher. Beside the matter laid down in the book, direction, measurement and division of lines into not more than three equal parts. Correct position of the body, holding of the pencil, neatness and cleanliness of work must be attended to throughout the entire course.

SINGING. Easy songs with English and German words; training of the ear and voice: three new songs.

SECOND QUARTER.

READING. McGuffey's First Reader to page 45, and Knell & Jones' Phonic Reader to Lesson XXX.

SPELLING in connection therewith and with Object Lessons. In the dictation exercises the greatest possible care must be taken 1) to prevent mistakes, 2) to have the mistakes corrected by the pupils under the direction of the teacher, and 3) none but good penmanship is to be permitted.

NUMBER to thirty. Multiplication table so far, also counting by twos, threes, fours to perfection.

CONVERSATION about the parts of the human and animal body and plants.

GERMAN: Conversation, as in first quarter continued; all the elementary sounds represented by script letters and dictation exercises on the same.

DRAWING: Kruesi's Drawing Book No. 1, second fourth.

SINGING: Three new songs.

THIRD QUARTER.

READING: McGuffey's First Reader to Page 64 and Knell & Jones' Phonic Reader to Lesson XLVIII and **SPELLING** in connection therewith.

NUMBER to *fifty* and constant drill in the 4 fundamental rules so far.

CONVERSATION about the parts of objects continued; formation of sentences in singular and plural number and grouping of objects as they belong together.

GERMAN: Reading on Charts and in Primer, "Ortmann's Erstes Schulbuch." Copying the lessons read on Charts and in Primer, and dictation exercises as far as the development of pupils will permit.

DRAWING: Kruesi's Drawing Book No. 1, third fourth.

SINGING: Three new songs.

FOURTH QUARTER.

READING: McGuffey's First Reader completed and Knell and Jones' Phonic Reader to Lesson LXIV.

SPELLING as above indicated.

NUMBER to *one hundred*.

CONVERSATION: Review as far as No. 60 in Syllabus for Object and Language Lessons.

GERMAN: Reading on Charts continued and in Primer. Dictation exercises involving the use of capital letters.

DRAWING. Kruesi's Drawing Book No. 1 completed.

SINGING: Three new songs

SIXTH GRADE.—THIRD YEAR.

FIRST QUARTER.

READING: McGuffey's Second Reader to Page 45, and Knell & Jones' Phonic Reader to Lesson LXXII for instruction in Language. The lessons to be discussed, and sentences similar to the ones laid down from Lesson LXV—LXXII formed by the pupils, teaching practically nouns and adjectives (pronouns, verbs and prepositions), also the elements of the simple sentence, without however using the grammatical terms therefor.

NUMBERS: Notation and numeration to second period; drill in writing and reading numbers and in rapid addition; multiplication table of 6 to perfection. (Time not to exceed 25 minutes per day.)

CONVERSATION: Qualities of objects as to color and shape to Section 65 in Syllabus.

GERMAN: Reading on charts continued and First Reader to Page 27. Dictation exercises from the lessons read. (Great care must be taken that the pupils pronounce clearly and distinctly all consonants combinations.)

DRAWING: Kruesi's Drawing Book No. 2, first fourth.

SINGING: The tones c, e, g, c in connection with 2-4, 3-4 and 4-4 measure; whole rest, half rest, quarter rest. Three new songs.

SECOND QUARTER.

READING. McGuffey's Second Reader to Page 82, and Knell & Jones' Phonic Reader to Lesson LXXXI, teaching practically the adverbial element and the use of the coordinate conjunctions *and*, *or* and *but*; the most common prefixes and suffixes, also families of words growing out of one root.

NUMBER: Notation and numeration; multiplication table to 8 to perfection; analysis of simple problems involving not more than one step in addition, subtraction and multiplication.

CONVERSATION: Qualities of things as to size, weight and comparison of qualities practically to section 70 in Syllabus.

GERMAN: First Reader to Page 35.

DRAWING: Kruesi's Drawing Book No. 2, second fourth.

SINGING: Three new songs.

THIRD QUARTER.

READING: McGuffey's Second Reader to page 124 and Knell and Jones' Phonic Reader to Lesson CIV.

LANGUAGE: Little compositions similar to the above lessons in Phonic Reader developed, then neatly to be copied with leadpencil into a special copy book.

NUMBER: Multiplication table to 12 to perfection, practise in multiplication as far as 12 in multiplier. The teachers may use Felter's Primary Arithmetic for practical assistance.

CONVERSATION: Points of the compass and drill in applying the same. Physical features of land and water according to Colton's Geographical Cards and by actual inspection of a river, lake, island, peninsula, isthmus, mountain, &c. Review of preceding work to Sect. 73 in Syllabus.

GERMAN: First Reader to Page 44.

DRAWING: Kruesi's Drawing Book No. 2, 3d fourth.

SINGING: Three new songs.

FOURTH QUARTER.

READING: McGuffey's Second Reader and Knell & Jones' Phonic Reader completed.

LANGUAGE: Compositions and formation of sentences, spelling to be always carefully attended to

NUMBER: Multiplication to two places in the multiplier; analysis of simple problems involving not more than one step.

CONVERSATION: Beside the geographical instruction on the physical features of land and water, the different roads and railroads leading to Belleville, their termini, location and direction. Division of the year into months, weeks and days, the seasons and the names of the months of the year and the days of the week.

GERMAN: First Reader to Page 55.

DRAWING: Kruesi's Drawing Book No 2, completed.

SINGING: Three new songs.

FIFTH GRADE.--FOURTH YEAR.**FIRST QUARTER.**

READING: McGuffey's Third Reader to Page 81.

SPELLING: All the words from the Reader and those occurring in CONVERSATION and in the other branches

LANGUAGE: Actions discussed, and use of the verbs denoting the same. Verbs requiring an object (without, however, using this term) and exercises both orally and in writing, exemplifying the use of the direct object. To No. 84 in Syllabus.

COMPOSITION on pieces of furniture, articles of food, etc., letters to teachers and schoolmates.

ARITHMETIC: Analysis of problems, both mental and written, embodying Addition, Subtraction and Multiplication. Felter's Primary Arithmetic. (30 minutes per day.)

GEOGRAPHY: Map of the schoolroom, schoolyard etc., to be drawn according to actual measurement on a proportionate scale by the pupils under the guidance of the teacher, then to be read.

GERMAN: First Reader to Page 64; dictation exercises and formation of sentences, first orally, then committed to writing.

PENMANSHIP. First use of pen and ink; writing to be taught in classes, all pupils writing the same copy at the same time, counting the principles Payson, Duntun & Scribner's Copy Book No. 1, first half.

DRAWING: Kruesi's Synthetic Course, Book No. 3, first fourth.

SINGING: Eighth notes and rests in 2-4, 3-4 and 4-4 measure, the tones d, f. Three new songs.

SECOND QUARTER.

READING: McGuffey's Third Reader to Page 148.

LANGUAGE: Actions and modifications of the same as to place, practically; correct use of the prepositions employed for this purpose. Formation of the plural number taught practically and rules abstracted. To No. 91 in Syllabus.

COMPOSITION as in the first quarter.

ARITHMETIC: Felter's Primary Arithmetic. Analysis of concrete problems involving two steps. All work in Arithmetic should be prompt and lively. Roman notation to C.

GEOGRAPHY: Maps of Belleville and St. Clair County, range, baseline, township.

GERMAN: First Reader completed. The pupils should now be able to spell correctly all the words they have met with in their book.

PENMANSHIP: Copybook No. 1, second half.

DRAWING: Kruesi's Synthetic Course, Book No. 3, second fourth

SINGING: Three new songs.

THIRD QUARTER.

READING: McGuffey's Third Reader to Page 192.

LANGUAGE: Actions and modifications of the same as to time and manner, to No. 96 in Syllabus. Common and proper nouns.

COMPOSITION as in previous quarters.

ARITHMETIC: Felter's Primary Arithmetic.

GEOGRAPHY: The State of Illinois; its boundaries, rivers, railroads, cities and productions.

GERMAN: Second Reader, first Part.

PENMANSHIP: First half of Copybook No. 2 reviewed.

Drawing: Kruesi's Synthetic Course, Book No. 3, third fourth.

SINGING: Three new songs.

FOURTH QUARTER.

READING: McGuffey's Third Reader completed.

LANGUAGE: Modification of actions as to cause, and review of the entire work of this year to No. 101 in Syllabus. Comparison of qualities and formation of the comparative and superlative degrees by inflection and form words practically and rule abstracted. Composition on plants and domestic animals.

ARITHMETIC: Felter's Primary Arithmetic to Page 94. Exercises in addition, subtraction and multiplication, the results not to exceed hundreds of millions.

GEOGRAPHY: Review of the work of the year.

GERMAN: Second Reader; for language lessons Part II, for reading Part IV to be used.

PENMANSHIP: Copy book No. 1, 2d half reviewed.

DRAWING: Kruesi's Synthetic Course, Book No. 3 completed.

SINGING: Three new songs.

FOURTH GRADE.-FIFTH YEAR.

READING : McGuffey's Fourth Reader to Page 85.

SPELLING : Beside the new words from the Reader, all the terms from the different branches. Dictation exercises into separate copy books, at least twice a week.

LANGUAGE : Subject and predicate; active and passive voice. Compositions according to Syllabus as far as No. 110 and on similar subjects.

ARITHMETIC : Subtraction; equal numbers; greater and smaller number; difference. Exercises orally and in writing. Felter's Intermediate Arithmetic.

GEOGRAPHY : Guyot's Intermediate Geography to Page 9. Before the lesson is assigned from the book, the topics to be discussed by referring the pupils to their observations in the vicinity of the town.

GERMAN : Selections from Second Reader. Dictation exercises. **GRAMMAR** : The simple sentence and parts of speech; nouns, verbs and adjectives. **DECLAMATION** : 12 pieces adapted to the capacity of the pupils.

PENMANSHIP : First half of copybook No. 2.

DRAWING : Kruesi's Synthetic Course, Book No. 4, first fourth.

SINGING : The tones a, b, c,, ; dotted notes; three new songs.

SECOND QUARTER.

READING : McGuffey's Fourth Reader to Page 140.

LANGUAGE : Present, past and future tense of regular and irregular verbs; Compositions according to Syllabus to No. 121.

ARITHMETIC : Divisibility of number up to 100; divisor not to exceed 9. Felter's Intermediate Arithmetic.

GEOGRAPHY : Guyot's Intermediate Geography to Page 14; Sec. VII.

PENMANSHIP : Second half of Copybook No. 2.

DRAWING : Kruesi's Drawing Book No. 4, second fourth.

SINGING : Three new songs.

THIRD QUARTER.

READING : McGuffey's Fourth Reader to Page 195.

LANGUAGE : Transitive and intransitive verbs.

COMPOSITION according to Syllabus to No. 125.

ARITHMETIC : Fractions. Felter's Intermediate Arithmetic.

GEOGRAPHY : Guyot's Intermediate Geography to Page 16, Lesson VII.

HISTORY : Biographical sketches of distinguished men and women : Columbus, Ponce de Leon, De Soto, Captain Smith, Sir Walter Raleigh, Lord Baltimore, Peter Stuyvesant, William Penn, Roger Williams, Anna Hutchinson.

PENMANSHIP : First half of Copybook No. 2, reviewed.

DRAWING : Kruesi's Synthetic Course, Book No. 4, third fourth.

SINGING : Three new songs.

FOURTH QUARTER.

READING : McGuffey's Fourth Reader completed.

LANGUAGE : Review of preceding work.

COMPOSITION according to Syllabus to No. 131.

ARITHMETIC : Division, divisor not to exceed 50. Felter's Intermediate Arithmetic to Page 129.

GEOGRAPHY : Guyot's Intermediate Geography to Page 18, Lesson XII.

HISTORY : Biographical sketches of Moses, Cyrus, Lycurgus, Solon, Alexander the Great, Mahomet, William of Normandy, Wicliffe, Luther, Elizabeth of England.

PENMANSHIP : Second half of Copybook No. 2, reviewed.

DRAWING : Kruesi's Drawing Book No. 4 completed.

SINGING : Three new songs

THIRD GRADE.--SIXTH YEAR.

FIRST QUARTER.

READING : Independent Fourth Reader.

LANGUAGE : The simple sentence and its construction. Person, number and gender of the subject and tense and mood of the predicate. **COMPOSITION** : Renarration of simple stories. &c., transposing poetry into prose.

ARITHMETIC : Prime and composite numbers ; comparison of numbers by division. Felter's Intermediate Arithmetic.

GEOGRAPHY : South America, to Page 24 in Guyot's Intermediate Geography.

HISTORY : Discovery of America and Explorations to Page 16 in Anderson's Grammar School History of the United States.

NATURAL HISTORY : Botany, 1) leaf and its forms, 2) venation, 3) bases, 4) apexes. 5) lobes. 6) sinuses,

7) kinds, 8) shapes, 9) simple and compound leaves, 10) parts of compound, 11) pinnate varieties, 13) forms of stipules, 14) stem, 15) parts of stem, 16) position of leaves, 17) arrangement of leaves, 18) shapes of stem, 19) attitude of stem, inflorescence, 20) solitary and clustered inflorescence, 21) solitary, terminal and axillary inflorescence. Review.

NATURAL PHILOSOPHY: Heat; generation of heat by friction, 2) by compression, 3) by chemical changes, 4) by the rays of the sun; effects of heat, 5) expansion of solids, 6) of liquids, 7) of gases. Review.

GERMAN: READING: The first half of Third Reader. Writing in connection with Reading and Orthography. **GRAMMAR:** The simple sentence containing all the elements and the parts of speech employed in its formation. **DECLAMATION:** 12 poems suited to the capacity of the pupils.

PENMANSHIP: Copybook No. 3, first half.

DRAWING: Kruesi's Analytic Course, Book 1.

SINGING: The tones d., e., and c. b a g. 3-8 and 6-8 measure. Three new songs.

SECOND QUARTER.

READING: Same as in first quarter.

LANGUAGE: The adjective element consisting of the limiting and qualifying adjective, the noun in the possessive case and the phrase.

COMPOSITION: Same as in First Quarter.

ARITHMETIC: Factoring and cancellation; Felter's Intermediate Arithmetic.

GEOGRAPHY: North America; to Page 30 in Guyot's Intermediate Geography.

HISTORY: Colonial history of Virginia, Massachusetts and New Hampshire to Page 28 in textbook.

NATURAL HISTORY: 1) squirrel, rabbit; 2) opossum; 3) woodpecker, quail; 4) dove, guinea fowl; 5) turtle, snake; 6) lizard, frog; 7) salamander, herring; 8) catfish, perch; 9) turnus, asterius; review.

NATURAL PHILOSOPHY: Thermometer; 1) parts; 2) uses; 3) history; 4) expansion of water through cold; 5) currents in water and air; 6) circulation of water through heat; 7) rising of heated air, review.

PEMANSHIP: Copybook No. 3, second half.

DRAWING: Same as in First Quarter.

SINGING: Three new songs.

THIRD QUARTER.

READING: Same as in First Quarter.

LANGUAGE: The objective element, direct and indirect object; double object after verbs denoting a giving.

COMPOSITION: Same as in preceding quarters.

ARITHMETIC: U. S. money; addition and subtraction; text book to Page 145.

GEOGRAPHY: Africa, to Page 35 in text book.

HISTORY: Colonial history of Connecticut and the Four United Colonies to King George's War, to Page 37 in text book.

NATURAL HISTORY: 1] Cceropia, polyphemus; 2] elater, horn-beetle; 3] grasshopper, mantis; 4] dragon-fly, ephemera; 5] spider, scorpion; 6] myriapods; 7] freshwater lobster; 8] snail, clam; 9] horsefly, botfly; review.

NATURAL PHILOSOPHY: 1] Draft und heating by hot air; 2] the winds and their causes; 3] melting of solids; 4] evaporation of fluids; 5] melting, latent heat; 6] cold produced through evaporation; review.

PENMANSHIP: Copybook No. 3, first half reviewed.

DRAWING: As in preceding quarters.

SINGING: Three new songs.

FOURTH QUARTER.

READING: Same as above.

LANGUAGE: The adverbial element of place, time and manner, consisting of the simple adverb and the phrase; then review of the work of the previous quarters.

ARITHMETIC: Multiplication and Division of U. S. money, to Page 173 in textbook.

GEOGRAPHY: Review and extension of the work done in three preceding quarters of the year.

HISTORY: Colonization of New York, New Jersey, Maryland, Delaware, the Carolinas and Georgia, to Page 48 in textbook, and review.

NATURAL HISTORY: Flower, 1] parts of flower; 2] parts of calyx; 3] parts of the corolla; 4] kinds of calyx; 5] kinds of corolla and periaath; 6] regular and irregular corollas and perianths; 7] parts of the stamens; 8] parts of the pistil; 9] parts of the ovary; 10] parts of the petals; 11] parts of gamopetalous corolla; 12] kinds of regular gamopetalous corolla; 13] kinds of irregular gamopetalous corolla; 14] crowns, spurs and nectaries; 15] root, taproot, fibrous root; 16] description of plants; review.

NATURAL PHILOSOPHY: 1) Enhancement or retardation of boiling by the decrease or the increase of the pressure of the atmosphere; 2) formation of steam and steam power; 3) Papin's pot; Leidenfrost's experiment; 5) evaporation; 6) enhancement or retardation of evaporation; 7) phenomena of the atmosphere; review.

PENMANSHIP: Copybook No. 3 second half reviewed.

DRAWING: As above.

SINGING: Three new songs.

SECOND GRADE.—SEVENTH YEAR.

FIRST QUARTER.

READING: Selections from Independent Fifth Reader throughout the term.

LANGUAGE: The complex sentence; the adjective clause; the relative pronoun and its declension.

COMPOSITION: Subjects to be taken from Natural History and Philosophy.

ARITHMETIC: Addition and subtraction of common fractions; Felter's Practical Arithmetic

GEOGRAPHY: Australia and Asia; Guyot's Intermediate Geography to Page 42.

HISTORY: French and Indian War to Page 63 in textbook.

NATURAL HISTORY: Flower; 1) the symmetry of flowers; 2) complete and incomplete flowers; 3) essential and protecting organs; 4) dichlamydeous and monochlamydeous, achlamydeous; 5) perfect, imperfect and neutral flowers; 6) monoecious, dioecious and polygamous plants; 7) form of receptacle and insertion of floral organs; 8) polyandrous stamens; 9) the growing together of stamens; 10) the growing together of carpels; 11) the union of floral whorls with each other—calyx and pistil; 12) the union of floral whorls with each other—corolla; 13) the union of floral whorls with each other—stamens; 14) receptacle; 15) appendages of receptacle; 16) comparing and classifying plants.

NATURAL PHILOSOPHY: 1) Distribution of heat; 2) propagation of heat through solids; 3) through liquids; 4) through gases; 5) poor and good conductors and their practical application; 6) radiation of heat, stoves and their construction; 7) absorption and reflection in different degrees by different solids, liquids and gases; review.

GERMAN: READING: The second half of the Third Reader. **WRITING:** as in Third Grade, the pupils shall learn to write the reading lessons from memory and re-narrate in writing fables and stories told by the teacher. **GRAMMAR:** The contracted and the complex sentence with the most essential parts of etymology. **DECLAMATION:** 12 poems.

PENMANSHIP: Copybook No. 4, first half.

DRAWING: Kruesi's Analytic Course, Book No. 2.

SINGING: Extension of the scale to two octaves; triplets; sixteenth notes and rests; G E F major. Three new songs.

SECOND QUARTER.

LANGUAGE: The complex sentence; the objective clause and the conjunctions connecting the same to the verb of the principal clause. **COMPOSITION.**

ARITHMETIC: Multiplication and division of common fractions.

GEOGRAPHY: Europe, to Page 49 in text book.

HISTORY: American Revolution to 1776: Page 73 in textbook.

NATURAL HISTORY: 1] Dog; 2] rat, mouse; 3] cow; 4] duck, snipe; 5] owl, hawk; 6] sparrow, robin; 7] turtle, lizard; 8] sturgeon, bream; 9] bee, wasp: review.

NATURAL PHILOSOPHY: 1] Fluids; 2] mobility and spherical form of small fluid masses; 3] pressure of a fluid on the bottom of a vessel; 4] pressure in all directions; 5] the direction of the surface of a fluid at rest; 6] level; 7] waterworks; 8] fountains; 9] Artesian wells; 10] capillarity, review.

PENMANSHIP: Copybook No. 4, second half.

DRAWING: Kruesi's Analytic Course, Book 2.

SINGING: Three new songs.

THIRD QUARTER.

LANGUAGE: The complex sentence; the adverbial clause and the conjunctions connecting the same to the verb of the principal clause. **Composition.**

ARITHMETIC: Decimal fractions.

GEOGRAPHY: The United States, to Page 59 in textbook.

HISTORY: The American Revolution, to Page 88 in textbook.

NATURAL HISTORY: 1] Fly, mosquito; 2] harvest-fly, treehopper; 3] philodice, vanessa; 4] sphinx, Luna moth; 5] worm; 6] snail, oyster; 7] sea-cucumber; 8] sea-urchin; 9] starfish: review.

NATURAL PHILOSOPHY: 1] Pressure of immersed bodies; 2] loss of weight of immersed bodies; 3] laws of Archimedes; 4] swimming and sinking of bodies; 5] specific weight of solids and liquids; 6] areometer; 7] the motion of flowing water and the motion of waves; 8] velocity; 9] water power and water-wheels; review.

PENMANSHIP: Copybook No. 4, first half reviewed.

DRAWING: Kruesi's Analytic Course, Book No. 3.

SINGING: Three new songs.

FOURTH QUARTER

LANGUAGE: The substantive clause; review of the work of the year. **COMPOSITION.**

ARITHMETIC: The four fundamental rules in compound numbers; review of the work of the year.

GEOGRAPHY: Review of the work of this and the preceding grade, and the Earth considered as a whole.

HISTORY: American Revolution completed, to Page 98 in textbook; review of colonial history and revolution.

NATURAL HISTORY: 1] Parts of stamens; 2] number and shape of anther-lobes; 3] dehiscence of the anther; 4] introrse and extrorse anthers; 5] attachment of filament to anther; 6] forms of filaments; 7] structure and forms of pollen; 8] forms of connective; 9] general features of stamens; 10] pistil—kinds of stigma; 11] form and position of style; 12] kinds of pistil; 13] structure of ovaries; 14] placentation; 15] modes of dehiscence; 16] directions of ovules and seeds; 17] parts of the ovule; 18] kinds of ovule, fruit and seed; 19] composition of fruit; 20] parts of the pericarp; 21] classification of fruit; review.

NATURAL PHILOSOPHY. 1] Gases; 2] elasticity of compressed air; 3] Mariotte's law; 4] diving bell; 5] compression-pump; 6] Heron's ball; 7] pressure of the atmosphere; 8] weight of the atmosphere; 9] lamps; 10] bellows; 11] breathing; 12] suction; 13] syphon; 14] common pump; 15] barometer; 16] force pump; 17] force-pump with air-chamber, fire-engine; review.

PENMANSHIP: Copybook No. 4, second half reviewed.

DRAWING: Kruesi's Analytic Course, Book No. 3.

SINGING: Three new songs.

FIRST GRADE.-DIVISION B.

READING: Selections from Independent Fifth Reader.

GRAMMAR: The abridged clause; the participial noun; declension and conjugation systematized.

COMPOSITION: Letter-writing, kinds and form of letters.

ARITHMETIC: Percentage and its application; interest and its application.

GEOGRAPHY: The United States as a whole and individually.

HISTORY: Great Rebellion, to Page 152 in text-book.

NATURAL HISTORY. I. Quarter. Botany: the orders and families of the vegetable kingdom; analysis of plants.

II. Quarter. Zoology; lowest forms of animal life; sarcodea, sponges and infusoria; madreporians and echinodermata.

III. Quarter. Structure and classification of vertebrates.

IV. Quarter. Botany continued.

NATURAL PHILOSOPHY. I. Quarter. 1] Liquids; 2] springs and Artesian wells; 3] pressure of liquids; 4] hydraulic press, 5] specific gravity; 6] capillary force.

II. Quarter. Hydraulics: Liquids flowing through pipes; 2] Liquids flowing in beds; 3] waves and tides. 4] waterwheels; 5] Archimedes' screw; 6] hydraulic ram.

III. Quarter. Pneumatics: 1] gases and vapors; 2] air and atmosphere; 3] barometer; 4] airpump; 5] condensing pump; 6] syphon; 7] pumps.

IV. Quarter. Calorics.

GERMAN. READING: Selections from "Lebensbilder III" and reproduction of the same by the pupils.

GRAMMAR: Conjugation of the verb in the indicative mode; application of the same in the sentence; the simple sentence and its elements; dictation exercises.

COMPOSITION: letters, descriptions, narrations and transposition of poetry into prose.

DRAWING: Kruesi's Perspective Course. 1) The laws of perspective in lines, surfaces and solids; 2) drawing of geometrical forms in different positions; 3) application of the laws of perspective in more complicated solids; 4) landscapes, plants and animals.

SINGING: D and B flat major; twelve new songs.

FIRST GRADE:--DIVISION A.

READING: Selections from Independent Sixth Reader.

GRAMMAR AND COMPOSITION.

ARITHMETIC: Proportion, simple and compound; partnership; alligation and mensuration of surfaces and the simpler solids.

GEOGRAPHY: Physical Geography.

HISTORY: Great Rebellion to the present time; civilization of the U. S.; science of government; constitution of the U. S.

NATURAL HISTORY: I, III & IV. quarter same as in Division B., II. quarter: mollusks.

NATURAL PHILOSOPHY: Same as in Division B.

GERMAN: READING: Selections from "Lebensbilder" III, reproduced by the pupils; **GRAMMAR:** General review of syntax; the simple and compound sentence; the parts of speech and their inflection; conjugation, declension and comparison; dictation exercises. **COMPOSITION:** subjects selected from History and Natural History.

DRAWING: Same as in Division B.

SINGING: Same as in Division B.

HIGH SCHOOL.

COMPOSITION.

ALGEBRA: To equations of the second degree.

GEOMETRY: In its application to the mensuration of surfaces and solids.

HISTORY: Universal History.

NATURAL PHILOSOPHY: *I. Quarter:* **OPTICS.** 1) vision; 2) sources of light; 3) propagation; 4) reflection; 5) refraction; 6) polarisation; 7) optical instruments; 8) theory of light.

II. Quarter: **ACOUSTICS:** 1) the ear, 2) the production of sound, 3) transmission of sound, 4) reflection, 5) musical instruments.

III. Quarter: **ELECTRICITY.** 1) frictional electricity, positive and negative electricity; 2) conductors and non-conductors; 3) electric battery, Leyden jar; 4) electrical machine; 5) physiological, physical and chemical results of electricity; 6) lightning and lightning rods; 7) theory of electricity.

IV. Quarter: **VOLTAIC ELECTRICITY:** 1] history, 2] generation, 3] electromotors, 4] batteries, 5] electric mul-

multipliers, 6] effects of Voltaic electricity, 7] theory of Voltaic electricity. **THERMO-ELECTRICITY.** **MAGNETISM.** 1] Natural and artificial magnets, 2] poles and equators of magnets, 3] compass and dipping needle, 4] theory of magnetism. **ELECTRO-MAGNETISM.** 1] magnetism produced by electricity, 2] electricity produced by magnetism, 3] electric coils, 4] helix, 5] induction of magnetism, telegraphs.

PHYSIOLOGY: I. Quarter: OSTEOLOGY of man and **MYOLOGY.**

II. Quarter. Digestion, absorption, respiration, circulation.

III. Quarter. NEUROLOGY.

IV. Quarter. Organs of sense.

GERMAN: READING: Selections from "Lebensbilder" III, especially poetry, and history of German Literature. **GRAMMAR:** A general review of orthography, etymology and syntax. **COMPOSITION:** Episodes from Universal History, biographies, business letters.

DRAWING: Same as in first grade.

SINGING: A & E major. A & E flat Major. The minor scale. Three-part songs.