History: The interest the children have shown in China has induced the teacher to continue the work longer than was at first intended,- the subjects taken up being such as would give the children an outline of what they would want to know in regard to any people studied: how the houses, (materials, shape, furniture, etc) show adaptation to environment; how the industries depend upon environment; how this people differs from other peoples known about; comparison in regard to superiority of this over other peoples.

The special points taken up this week were Confusianism, and the worship of ancestors. The children were told that in all of our study of China no one of them had asked who the man was whom the Chinese regarded as their greatest man. They were asked if we had not had a great man in all the history we had studied, and recalled Hiram of Tyre, Cyrus and Alex. the Great, Rameses II,- and said that in America there was George Washington. They were told simply the aim of Confusius, and how he is regarded by the Chinese.

In taking up Ancestor worship, they were told of the room devoted to the tablets of ancesters, and how each great event in the family is solemnly announced in this room to the tablets.

The children asked again about the sedan chairs, and were shown a picture of one. Someone wanted to know how much money the carriers got, and were told "only a few cents a day". They were surprised at this, and were questioned again on "population" and "means of subsistence", and seemed to realize how closely one much crowd on the other. One of the boys' said, "Well, why don't people give them a few cents extra; that isn't

being kind? No attempt had been made to elicit sympathy,- simply the facts had been stated. Miss Runyon.

Art work: Have been working in clay, making the pillars for their model of the temple of Karnac.

Music: Have composed a Vacation Song:

When Vacation comes again,
The children will go away,
And have all sorts of sport and fun,
Under the trees at play.
They'll go on picnics in the woods
And pick all kinds of flowers
And swing in hammocks in the trees
And fish and fish for hours.

History: Time has been spent in reading about, writing about and discussing the causes of the French and Indian war and in finding where the contest would come, where it would be best to fortify, etc. In searching for places for forts the children were referred b ck to the ways of travel, and said that the water ways would be easier. We traced the three mains lines of attack from Canada,-- through lake Champlain abd the Hudson,- through Niagara to the branches of the Ohio,- and the route sometimes used over land through Maine. On the map we found the names of the forts placed along these routes.

Miss Runyon.

Science: Spent a half hour in the garden gathering onions and radishes for their luncheon. They worked half an hour in the shop on insect boxes, beginning the frame for the glass at the top.

They started anothe experiment to see whether there is acid in the roots of plants. They were shown the effect of acid on litmus paper-- turning the blue to red--, so planted some seeds on blue litmus paper to watch the effect. They were told that the blue litmus paper when it had been turned red by an acid, could be turned back to its original color by treating with a substance which had the opposite effect of an acid. They were told that ammonium was one of these substances, and we discussed its use in alleviating the pain of an acid burn.

Miss Andrews.

History (U.S.) They have worked out the treaty of peace at the close of the Revolution, and found on the map the boundaries defined at that time. Some of the children wanted to know how the rest of the U.S. was obtained, and as this was something I had planned to give them soon, we took it up at this time,- i.e. the Louisiana purchase, and Alaska purchase. Miss Bacon.

Number: Continued development of multiplication tables. We first made an inventory of all the pupils were sure of. New work for the day given was the making of a table of the elevens and they were led to discover that up to the multiple of nine the units figure in the multiple was always the same as the tens figure. Besides that the pupils made tables beginning with 3, then doubling, etc. This process led them to see that the sixes and twelves might be found easily from the threes, just as the fours and eights were found from the twos.

Mrs. Baxter.

Science: Most of the group finished their work, which was to demonstrate the fact that a stem cut across slanting would allow more room for roots to grow out than one cut straight. When they had finished their drawing they found it very difficult to write out an account of what they had done,- largely on account of the technicalities involved. Miss Hill.

O.K

Spent a half hour in the garden. Miss Andrews.

History (Same as VI. Miss Bacon.

Latin: Have been reviewing the work gone over by means of spelling matches and writing out translation of stories taken up, illustrating them. Miss Schibsby.

French: We have begun reading Jeanne d'Arc. Every effort is made to have the children discover the meaning of new words from the context or their resemblance to other words with the same root. Much use has been made of the pictures of Boutet de Monvel, illustrating the subject, and the meaning of the words has been further illustrated by actions. The little song "La Toilette de Polichinelle" has been acted to music. We are having a review of all the verbs which they have had. The children are being drilled for their various parts in the final exercises. Several of them are to have separate pieces, two are in a dialogue "La Violette", and a third in "La Cigale, La Fourmi et Le Rat."

La Cigale, La Fourmi et Le Rat.

La Cigale: J'ai chanté tout l'été, maintenant la bise est venue et je n'ai pas un seul petit morceau de mouche ou de vermisseau. Je vais crier famine chez la fourmi, ma voisine et la prier de me preter quelques grains, pour subsister jusqu' à la saison nouvelle. (Elle frappe à la porte de la voisine). S'il vous plait, chère fourmi, pretez moi quelques grains. Je vous paierai avant l'août foi d'animal, interêt et principal.

La Fourmi: Je ne suis pas prêtense. Que faisiez vous au temps chaud?

La Cigale: Nuit et jour à tout venant je chantais, ne vous deplaise.

La Fourmi: (Etonnée). Vous chantiez! J'en suis fort aise. Eh bien! Dansez maintenant.

La Cigale. Je ne sais que faire. Voilà une feuille. Je vais me blottir au dessous attendant le mort.

La Forumi: Je vais sortir pour glaner encore quelques grains.

Le Rat: Je cherche un trou partout. (Avec joie) Enfin je le trouve. C'est la porte de la fourmilière, et, quand la fourmi retourne, je la mettrai en fuite en lui montrant le museau.

La Fourmi: (Elle retourne). Voilà un rat dans ma fourmilière. (pleurant) Je suis désolée d'avoir perdu ma demeure, mes provisions, et l'éspoir de bien passer l'hiver.

Je ne sais même plus ou aller passer la nuit.

La Cigale: (Sous la Feuille). Venez ici, ma voisine. Je vous donnerai la plus chaude place audessous de ma feuille. (A elle même). Elle a été bien dure,mais ce n'est pas une raison pour que je le sois aussi.

O.K.
S. Hardy.

Art work: Out of doors sketching.

Music: Have composed a Fourth of July song.

Hurrah for 1776
When the Liberty Bell was tolled.
The bombs are flying high in air
And the rockets go up so bold.

Hurrah, hurrah for 4th of July,
When we shall have so much fun,
With Roman candles and fire crackers
And nigger chasers that run.

When the sun goes down and the wheels go round,
And vases burst out so fine,
And the colored lights fleam out so bright
In the big vesuvius mine,-

Hurrah, hurrah for 4th of July, etc.

History: Most of the time has been spent in reading and in getting them to put together what they read in a clear statement of consequtive events. This has been found necessary because the readable style of the book they use makes the life of La Salle so interesting that they forget to select main things. They have also compared the trip of Marquette and Joliet with that of La Salle, and have seen that while the former voyagers went down the Mississippi in canoes, encamped for the winter depending simply on the Indians and small trading posts for provisions, La Salle twice left his men to go back to Canada for tools, provisions, etc. We deduced that the state of hostility of the Indians might have changed the conditions, and that it was not so easy to travel or to secure their assistance. We found too, that La Salle's aims were greater than those of Marquette and Joliet, and that his attempt was to take permanent possession,- hence the necessity for forts, more men, ships, etc. The outline maps are kept up, inserting routes, forts, etc.

Miss Runyon.

Latin: Are studying the story of Pyrrhus and the Romans. In grammar getting the feeling of subject, object verb and predicate

Miss Schibsby.

Physiology. We completed the work on intestinal digestion, the role of the liver and pancreas to digestion in the intestines. We discussed the character of foods that were digested in the intestines and also the mechanical effects involved in digestion there. Then we discussed the absorption of the food into the body,- where the absorbed foods go and the general routes by which they get into the blood. We then took up the blood,-

touching briefly upon its chemical and physical characters,- the appearance and function of the corpuscles. Examined the blood microscopically, noting the corpuscles,- their motion, and the coagulation of blood.

We will next discuss briefly the paths of the circulating blood and the heart, and then take up respiration.

Mr. Rogers/

Music: Have composed a Decoration Day song.

On Decoration Day,
We'll march in fine array,
And with our large brigade around
Around the streets parade.
The Union flag we'll wave,
Over the soldiers brave,
And lay the flowers carefully
Upon the lonesome grave.

When soldiers went to war,
Their hearts were full of glee,
And when they homeward came at last,
They shouted with victory.
Their comrades left behind,
They hadt tried in vain to save,
But they evermore remembered them
As numbered with the brave.

History (U.S.)

The children thought that Virginia was the first country to elect its head, and in this connection we discussed a republic and a democracy, going back to their last year's work in the history of Rome and Greece, taking Rome as a republic and Greece as a pure democracy. From this they worked out their definition of a democracy as a government directly by the people, and a republic as a representative govenrment. They discussed what the duties of citizens would be in such governments.

They have been reading the history of Va. from 1607 to 1619, and found that Dale declared martial law. The children were anxious to know why he declared it, and what it meant. After discussing the matter we came to the conclusion that martial law was declared only in cases of great danger to the country, and where punishments of infringement of laws must be immediate. One of the children suggested that "We declare martial law on the Kosminsky boys". Miss Bacon.

Latin: Studying verbs. Miss Schlesby.

Art work: Drew the camp of Group III. Miss Cushman.

French:

We have continued the reading of Jeanne d'arc. The new words are illustrated as much as possible by reference to the pictures and by actions. Conversation lessons have been had from time to time based on the reading, and the children have been asked to translate the English back into French. We are studying the second declension and reviewing the other verbs. The children have acted out the little song "La Toilette de Polichinelle". Miss Harding.

O.K.

Music: Have composed a baseball song:

O Chicago played Wisconsin
Just a little while ago,
And when Wisconsin rose to pitch,
He threw the ball just so!
But when young Hirsch got up to rap,
He smashed the ball pell mell,
And then he made a homer clean,
Which made the people yell

Oh!
Chicago.8 Chicago! Chicago! Go!
Fo it Chica!Go it Chica, Go it Chicago!

And as the game went on its course,
Excitement grew more high;
Each fellow worked just like a horse,
As the end was drawing nigh.
Wisconsin's face was growing long,
As balls we swiftly threw,
And as young Fred went out the gate,
The score stood 8 to 2.

Chorus.

History(U.S.) Same as VIII. Miss Bason.

Latin: Still working on verbs, charting them and learning vrious tense signs and mode signs. Miss Schibsby.

Number: Have been working out how a given angle can be constructed. This is in connection with work in science, finding the angles of incidence and reflection of light. Miss Bason.

Music: Have composed a Fourth of July song:

On fourth of july the flags will wave
And rockets will burst on high,
For years ago we fought the foe,
'til they turned their backs to fly.

Sis Boom! Hurrah for the fourth,
The glorious fourth of july!
Off with torpedoes and crackers and guns,
And colored balloons in the sky!

The children wake up in the early morn,
When Cannons are booming loud;
They take their crackers and light their punk,
And smoke goes up in a cloud.

Chorus.

Song Composition.

The children suggest several subject from which they choose by vote one for the song. A first line is then offered either with, or without melody. The group passes judgment upon it, and if it is accepted, a second line is called for. If there are too many suggestions given, it becomes confusing, and the members of the group are asked to offer their ideas in turn. If a line is given which is rhythmically incorrext, the teacher points this out by repeating it while swinging the pulse suggested by preceding lines. After the words are completed to the satisfaction of the class, the music is called for, line by line. The teacher takes each melodic phrase offered and quickly harmonizes an accompaniment in order that the group may better judge of its metic. After the song is finished, it is sung repeatedly until the class is thoroughly familiar with it; then it is analyzed. The pulse is first discovered, the children deciding how often an accented pulse should come. Differences of opinion are settled by vote. Next, they decide in what key it shall be sung, finding where it lies best for the voice. Ths is done by ear. An individual then comes to the keyboard and names the key decided upon. After naming do, the children give in turn short phrases of the song with their syllable names, and when the entire melody is thus named, they are ready to put it on the blackboard. The blackboa notes, if theyre are any, are discovered by playing the scale on the keyboard. The sort of note used for each pulse is then decided on by the swift or slow movement of the song.

Mrs. Kern.

Sub-primary.

June 9 and 16,1899

We took up the things people need in the summer to make them comfortable, the children thinking of the things themselves, and planning some of the material. They made houses of manilla paper and pasted little awnings on them. They dressed paper dolls, choosing from a great variety of materials -- silk, cotton and wool-- what they thought would be best for clothes at the summer season. In the winter they had dressed dolls by pasting the clothes on the front. Now they insisted on putting the clothing on the backs, as well. They made

They made parasols of cork, meat skewers, slats and paper, as the Japanese make them, and decorated them to suit themselves.

They made ice wagons of boxes and manilla paper, and cut the ice man out of paper and stuck him on front. This was entirely free work.

They illustrated their work with paper cuttings from colored paper, and water colors.

The weather was too warm for cooking, so they sliced banannas, and learned how to use the knife in slicing.

We talked about the summer vacation, and have made the things we will need in the country and the things we will find there. Trunks,- the cars, fans, and tents for camping.

They repeated the cooking of potatoes.

Miss La Victoire.

History and Science: The children built a fire out of doors and baked their clay dishes, and noticed that the yellow ochre with which they had painted them, turned red. They found that makny many of the dishes broke in the fire. We talked about what steam would do if it were confined, and they decided that the water was not entirely out of the center of the clay of the dishes, and that the expanding of it under heat had caused the breaking of the dishes. They wanted to make some more and let them dry all summer so that they would bake better. These were made, and ornamented by pressing a cord into the damp clay to make designs, as they had seen some made in the Field Museum. We talked about making bricks from clay, and what must be in the clay to make red brick.

They spent a half hour in the garden, and a half hour in finishing their boxes in the shop.

For number work they played a game in which I held in one hand a a certain number of small things, and in the other hand another number, and put them together and had them tell how many there were,; the one who could tell first kept the things, to find out at the end who had won the game. They also played a game of buying and selling, changing money,etc. Part of the time we used U.S. money. We talked about the metals of which the coins were made, and why a nickle is called a nickle. For a little experience in using money, the children counted up how much the cost of one bed in the garden was, i.e. the cost of the seed, earth, etc.

One period was sepnt in talking about the city government: fire department, paving etc. An excursion had been planned to the fire engine house, but all the children had been.

The children found that their gourds needed stringing, and they put up strings for them to climb on, and noticed that in one day the tendrils had clasped the strings. They went out in the vacant lot and compared other climbing plants found there.

About two months ago the children were measured to find out how much they grew in a definite time. We measured again this week, after two months, and found that the greatest growth had been one inch, and the least a half inch. Miss Andrews.

Cooking: As it was too hot to use the gas the teacher improvised a lesson on the making of sandwiches.

Materials: bread and butter;
Utensils: plate and case knife.

The bread was cut for pupils, as they were not able to do it. Two slices were presented to the class on a plate, and suggestions called for as to the way the slices might be laid on each other to fit. After numerous trials, most of them discovered that they could be made to fit. Each pupil made a sandwich, which, when cut properly, was packed in a box. The luncheon was eaten under the trees in a neighboring lot.

The care of garbage was spoken of in this lesson, and the point brought out that if each person took care of his own garbage there would be no need of one person doing all.

Mrs. Baxter.

Art work: Sketched out of doors.

Shop: Have been making a pencil holder, same model as formerly described.

Mr. Ball.

History: Have finished making their kiln and have succeeded in making charcoal in it by lighting a fire and closing up the chimney and the door, leaving a space for a draught underneath. When they had made a small basket full of charcoal they then built up a fire, packed the clay dishes in charcoal in the center and left them baking over night. The next day they tested them with water, and found that almost all the dishes were baked sufficiently to hold it.

Miss Hill.

Science: Spent a half hour going down to Fifty-third St. and finding out how poison ivy climbs. They saw that this was done by sending out roots. The roots did not take any nourishment from the tree, as they did not extend far enough into the bark, so the trees were apparently uninjured; the rooting was the method of climbing used by the plant.

They had fifteen minutes of number work. Talked about United States money, and learned the parts of a dollar. They played a game of adding and subtracting different amounts, as Group I and played.

Spent one hour in the garden transplanting the plants in the house into the garden, so that they would live without special care during the summer.

They spent one period in reviewing what they had learned about tendrils and in drawing on the board methods of climbing.

Miss Andrews.

Shop: Have been working on spindles.

Mr. Ball.

Art: Drew out of doors.

Miss Cushman.

Shop: III have been making a triple reel, as given by Alice Morse Earle, in "Home Life in Colonial Times"., and tent pegs for fastening to the ground vines needed in the garden.

History: This week was spent in summing up and reviewing from several points of view what had been given about China. The children were asked what was the chief kind of wood in China, and said "bamboo"; they they were told that this was a rather slender tree for building purposes, and were shown how the Chinese join it together in a kind of framework, as given by Le Duc, in "Habitations of Man in All Ages".

We compared the Chinese and Phoenicians from the point of view of finding out for themselves, and getting ideas from other peoples. We compared them with the Americans, and found that the Chinese were averse to "new" things. We compared the Chinese language -- characters standing for words, not sounds, and found a picture of a Chinese typewritte which had to have arrangements for making 4000 characters. The children were asked how many characters our type-writers had,- and recited the alphabet to get the number of letters necessary, and the figures 1 to 9, and 0.

Oneof the Children spoke of the chinese as coming from Phoenecia-- from which they think most things originated--, and was corrected by being told that the Chinese did not know where they came from to the place we call China. One of the children asked "Why the grandfathers didn't tell them?". He was asked if he knew where his great grand-father came from? He replied that his mother had told him "just the other day", but he had forgotten. None of the children knew where their great-grandfathers came from, or with one or two exceptions, grandfathers. So they realized how easy it was for the Chinese not to know, considering the time that had elapsed since their arrival.

They have been reading from Mira Pratt's "Stories of China"

Science:

They spent a half hour in putting up bean poles and strings. Miss Andrews.

Shop: Have been making some hexagonal bill files. This brings in some geometry, use of the compass, sawing, planing on angles, sharpening of the steel spur, etc. Mr. Ball.

History: We have taken up the beginning of the French and Indian war-- "Washington's First Battle", talked about it in discussionm read about it in their reading books, and have had given additional facts, - such as the fact that the war had not be formally declared, and that the French accused Washington of the murder of Jumnnville, the french commander, killed in the skirmish. The children were asked how nations declare war, and some remembered the declaration of war with Spain, made by the U.S. last year. Then we talked of how wars were named, bringing out that often each side refers to the war as war with the opposite opponent. We discussed a little, how wars might be written up by each side,-- that is the different view that might be taken of causes, battles, etc. We reviewed the grounds of the two claims, and found where the forts had been placed, and why.

We took up the treaty of peace, and found what it meant in land claims in America. Miss Runyon.

Science: Spent a half hour in the shop, and wrote a record of their experiment in planting peas on limestone. They found that the roots had traced a delicate line on the limestone, which made them think that the root tips contained acid. They then looked at their blue litmas paper, and found that it had turned pink in places where the roots had touched it. This was regarded as proof of the existence of acid in root tips.

They became interested in climbing plants, and examined those in the garden, and in the lots. Miss Andrews.

A hour was spent in the garden taking care of their herb beds, which they found had grown, but would not be ready for perhaps a year, as it takes two years to grow to good size.

History: We have been following out the acquisition of all the territory of the United States, from the boundaries at the close of the Revolution. We have taken up the acquisition of Alaska, porto Rica, Hawaii, the Philippines, etc.

After we had been over it one of the children took the map and went through the whole thing, describing how each part was obtained. Miss Bacon.

Science: Spent a half hour in making book covers and arranging their papers. Miss Andrews.

They have begun to work out the proportion of buds which develop into branches in one year's growth of wood. They count all the buds and shoots on several different branches and find the proportion which remains dormant. Miss Hill.

They found on several pear branches that in nearly all cases the proportion was about 2/3 of the total number. This introduced the idea of approximate values. They then began to calculate by how many the number of branches would probably increase in one, two and three years.

Miss Hill.

Sewing: A review given of the development of carding and spinning to to the larger and more complicated machines. Each pupil contributing a part of the information.

The point of the lesson was to bring out clearly the movements in the simple processes and to trace these in the more complex machines. (1) The carding and stripping movements in carding; (2) the twisting and drawing movements in spinning.

The pupils studied Hargreave's Jenny and found that it was similar to the one-thread wheel in which the spindle does the

twisting. They also studied Arkwright's Spinning Frame and found and interpreted the various parts of the machine and their uses. They found the rollers which do the drawing and the spindle, bobbin and flyer which do the spinning.

Mrs. Baxter.

Number: Tables of nine developed. Pupils made the table beginning with 1 x 9, going down to 9 x 9. The table was written on the blackboard and pupils were led to see that certain laws could be traced through out. Thus, e.g. 4 x 9 will give a product which has one less number of tens than the multiplier, and the sum of the tens and units digits is equal to nine . This may perhaps be shown more graphically:

		sum of tens and units digits equals	9
1 x 9	= 9		
2 x 9	equals 18	" " " " "	9
3xx 9	equal 27	" " " "	9
4 x 9	" 36		
5 x 9	" 45	etc.	

The law, therefore is as follows: The tens figure of the product in the table of nine is one less than the multiplier, and the sum of the digits of the product is always equal to nine. This law is true up to 10 x 9. Mrs. Baxter.

Shop: Some of the more capable children are working on the music bench; other are making bracket shelves or articles already described. Mr. Ball.

French:

Have dramatized gardening.

History: Same as VI. Miss Bacon.

Science: The children found that some of their slips were growing very nicely, and good roots had formed on them. They talked about how propagation of this kind could occur in nature without man's assistance. All had noticed how branches broke off from a tree in a storm, and thought that some plants that would take root in water, as the willlows,- might be washed upon a bank and take root in the soil; and that perhaps this fact accounted for so many willows growing on banks of streams.

We talked about the uses of grafting, and after looking at the pear tree decided that grafts could only be made in the autumn or early spring when the buds were dormant. MissAndrews.

Art. Work out of doors.

Shop: Have been making stamp boxes, bill files, pen racks,etc.

Group VII (b)

Science: After having completed the discussion of the circulation in general, that portion of circulation connected with respiration was taken up. The way in which the blood is aerated and arterialised was discussed, the substances in the blood which were affected by passage of blood through the lungs, etc.

We made experiments to show that the exhaled air contained relatively large quantities of Carbonic acid gas to that contained in air we inhale. We measured the quantity of air breathed out at a normal exspiration, measured the amount exhaled after a maximum inspiration, and that exhalable after a normal expiration. From these data we calculated the weight and volume of air breathed on an average day, and also the weight of oxygen breathen in one day. Mr. Rogers.

History: Have finished the life of La Salle as given in their readers, have summed it up for writing. Then the children were told of the period of about fifty years when the French built forts from the gulf of St. Lawrence to the mouth of the Miss., of the fact that these did not grow into colonies, but were simply trading posts and defense against the Indians; of the movements of the Indians, and of the hostility of various tribes. Then we took up the way in which the English colonies awoke to the fact that the French were holding this land which they also claimed, and of the formation of the Ohio Company, and Washington's trip to warn the French general and leave the territory; the breaking out of the French and Indian war, and read in this connection the story of Braddock's defeat. The boundaries settled by the treaty of paris in 1863 were traced. Then we took up Geogre Rogers Clark's expedition from Virginia, and the conquest of Kaskaskias and vincennes, which made it possible for the Americans to claim this territory in the treaty at the close of the Revolution. Miss Runyon.

Cooking and textile work: In all groups time has been spent in reviews.

Art. Work: Out of doors sketching.

Art work: Dramatization of a history class on the life of LaSalle, including questions and answers, pointing out on the map of routes, etc.

History: We have been working out the government of Virginia, following it from the granting of the constitution to the time when the charter was taken away and a royal governor appointed. Then we discussed how the council came to be the upper house of the legislature, so that it gave two houses, and the executive. Then we took up the social and industrial side, and saw why the people came to settle in plantations far apart: the fact that the land was rich and there was plenty of it; thay all raised tobacco, which used up the soil, and instead of trying to enrich it, they used new fields. We took up the introduction of slavery, and why it grew so rapidly in the south. We discussed why, during the first century, there were no large cities in Va,- owing to the fact that the planters sent their products directly to England, and ordered most of their supplies directly from Eng., hence there was no demand for "middlemen"

The children concluded that if the people lived far apart they could not very well have public schools, and drew the conclusion that the wealthy planters and those who cared for education, would have tutors, or send the children abroad; the poorer people would grow up in ignorance. Miss Bacon.

Science: The study of leaves hads been begun. Lilac twigs were first observed and the arrangement of the leaved noted. They were seen to be in pairs, and each pair at right angles to the pair below or above, thus forming cfour longitudinal rows. The leaves were broad and filled nearly all of the space, and the lower ones were larger than those nearer the tip,thus giving a large amount of exposed surface. The advantages of this arrangement were discussed. Some thought that it was advanta-

gous because the rain could fall on most of the upper surfaces and wash off the dust. Some thought that dew would accomplish the same purpose, but thought that dew fell. This idea was corrected by some one who knew that condensation takes place when air containing a certain amount of moisture is chilled to a certain point. Free access of air was mentioned as a possible advantage, but light was considered of more importance than any of the foregoing. A twig was held in a vertical position in the sun light and it was observed that the arrangement of the leaves was such that the greater part of their surfaces received direct sunlight. Other plants were examined and it was discovered that many have their leaves arranged in spirals, but still in vertical rows. It was seen to be an advantage to multiply rows when leaves are long and narrow as in the case of the golden rods and evening primroses.

Divided leaves, and such as the hemp, rag weed, etc. were examined and it was suggested that thses divisions are for admitting as much light as possible. This principle was extended to lobed leaves such as the oak, and some thought that the saw edges on many leaves was the first expression of this principle. This led to an examination of the veins if leaves and it was seen that irregular edges are due rather to mechanical necessities, depending upon the arrangement of the veins, and can be of very little in admitting light.

Mr. Moore.

History: Same as VIII.

Number work: Have finished the subject of angles of refraction. They were given one angle, and learned how to construct another equal to it. Then, they had to take the angle formed by incident and reflected ray and bisect it.

Miss Bacon.

Shop: Have put in most of their time on the music bench.

Printing: This has been done each week by assigning to children from the four older groups periods of a half hour in which they are excused from regular work, and print instead.

Group IX June 19

Science:

After finding that young seedlings are provided with a small store of food to enable them to get a good start, the question was raised how older plants support themselves. It was thought that they must derive their food from the soil and from the atmosphere. The elements derived from the soil were first considered. The children knew some of the chemical constituents of the soil and were told about others. They saw that plants can only get from the soil substances which it contains, and of these only such as are soluble, since all must pass into the plant through cell walls. The question was asked whether plants actually take in all available substances, and if not, how it could be determined which one taken in. A chemical analysis of a plant was suggested, and at this point it was necessary to tell them the chief ash constituents of plants, and that of these certain ones have been found by experiment to be essential. A solution containing these essential substances was prepared and some seedlings placed in it. Control specimens in distilled water were placed beside them, under similar conditions of light, heat , etc. After an interval of a few days the plants in the solution showed decidedly more growth of both root and shoot.

The materials derived from the air were next considered. The children knew the constituent elements of the atmosphere and in a general way that plants use carbon dioxide and oxygen. On account of the close of the term, it was not practicable to begin experiments to demonstrate photosynthesis and respiration, and it was therefore thought advisable to tell them as clearly as possible the distinction between the two processes involving food manufacture and food consumption. Moore.

Inventory, June, 1899

Kindergarten.

Supplies, Oct. 1	Missing, June 20,1899
12 hammers	1
18 pairs scissors	12
18 paste boxes	~~12~~ 9
6 boxes colored chalk	2
14 "sixth gift" boxes	none
14 "fifth gift" boxes	covers to 2 boxes
16 "fourth gift" boxes	none
15 "third gift" boxes	none
10 "second gift" boxes	"
1 box colered crayon	"
12 clay boards	"
18 tin pans	9
2 candle molds	none
1 box milk bottle tops	"
2 boxes meat skewers	"
2 pieces of oil cloth	"
8 flat irons	"
250 paper napkins	"
4 dish pans	"
12 dish towels	"
4 wash cloths	"
20 plates	"
12 cups and saucers	"
16 bowls	"
18 glasses	"
8 knives, forks, spoons	all missing
16 rakes, hoes and shovels	8
2 complete sets Hennesy blocks	None

Inventory, June , 1899

Shop.

12 bracket saws
8 special back saws
1 " cross cut saws
2 framing squares
1 compas saw
4 braces
5 machinists' hammers
1 hatchet
6 pairs scissors
10 1in squares
5 3/4 in chisels
11 2 " rules
8 pencil compasses
3 steel "
2 screw drivers
2 Sloyd knives
4 Caning tools
1 Automatic drill
6 No. 4 Iron planes
5 " 3 " planes.
3 block planes
Assorted german bits and Russell Jennings bits.
6 claw hammers
3 oil stones;
1 India oil stone
6 chip carving knives
9 old back saws, larger size
12 marking guages
12 spoke
1 long wooden plane
5 rip saws
4 large cross cut saws
6 assorted files
10 small iron clamps
1 mitre box and saw
2 counter brushes.

Inventory, June, 1899

Art work.

Oct.	June
10 easels, boards and paper blocks	same number
100 sheets gray paper	
8 boxes water colors	20 boxes
10 gross colored crayon	
35 kneaded rubbers	
25 chamois skins	
100 packages Prang paper	34 packages
25 boxes charcoal	12 boxes charcoal
3 atomizers	
(Amount contributed by parents for pictures not reported)	

School Inventory, June, 1899.

Kitchen Ware.

1 coffee mill
2 flour sifters
1 fruit press
2 rolling pins
1 potato masher
2 large granite cups
4 bread pans
16 granite utensil plates
18 wire strainers
16 salt shakers
12 flour shakers
5 soap dishes
4 match holders
2 tin dippers
1 deep-frying strainer
65 glass bottles
1 wash basin
5 earthen jars
8 potato brushes
1 bean pot
1 funnel
4 tin dishes pans
4 granite dish pans
1 roasting pan
2 broilers
2 dover egg beaters
2 large wooden spoons
1 nut meg grater
15 large graters
24 small tin dishes
15 large sauce pans
6 small sauce pans
16 large sauce pavers
6 small sauce pan covers.
20 white oval dishes
1 carving knife
1 paring knife
2 butter pads
18 wire egg beaters
18 kitchen forks
18 " knives
16 small yellow bowls
16 large " "
1 pudding mold
3 large granite double boilers
2 small tin double boilers
2 large granite kettles
6 " omelet pans
6 small " "
2 colanders
1 muffin pan
18 measuring cups
18 pint fruit jars
20 quart " "
19 cereal dishes
4 vegetable "
20 soup plates
12 small dinner plates
16 large " "
12 cups
1 large platter
2 small platters
4 salt cellars
2 sugar bowls
12 small cups
16 large saucers
10 small "
5 trays
1 soup tureen
16 custard cups
2 glass dishes
12 small tumblers
18 large tumblers
18 silver knives
18 " forks
6 " table spoons
24 " tea spoons
3 1/2 doz. napkins
1 table cloth
18 pint fruit jars
20 quart " "
8 tea spoons
12 table "
4 tin pans
3 granite pans
2 large white bowls
1 " yellow "
1 deep frying kettle
1 Christie bread knife.

Vacation Addresses of Teachers in the University Elementary School.

Miss Georgia Bason		184 Norton Ave., Pontiac, Mich.
Miss Katherine Camp	(first 6 weeks)	Woods Holl, Mass.
	(Second 6 ")	843 Fairmont St., Cleveland, O.
Miss Althea Harmer	(first 6 weeks)	Woods Holl, Mass.
	(Second 6 ")	Wissahicken, Pa.
Miss Florence La Victoire		3603 Ellis Ave., Chicago.
Mrs. P. O. Kern		Care M. Gutkind & Co., Bankers, Braunschweig, Germany.
Mr. Frank Ball		20 Clifton St., Worcester, Mass.
Miss Lillian Cushman		Highland Park, Ill.
Miss Katherine Andrews		336 Hampden Ct., Chicago.
Miss Mary Hill		46 Union St., New Brunswick, N.J.
Miss Laura L. Runyon,		1060 Arlington Ave., Plainfield, N.J
Miss Mary Tough		Hudson, N.Y.
Miss Marion Schibsby		2613 So. 15th St., Omaha, Neb.
Miss Georgia Seates		4109 Indiana Ave., Chicago.
Mrs. E. Baxter	(first 6 weeks)	Sauk City, Wis.
	(second 6 "	2727 Russel Ave., St. Louis, Mo.
Miss Wynne Lackerstein	1st 6 weeks	214 E. 40th St., Chicago
	2nd 6 "	Tower Hill, Spring Green, Wis.
Dr. John Dewey,		1329 Leavenworth St., San Francisco

Inventory, June, 1899.

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