

out, then spun, then wound on the bobbin. The next invention on this was the flyer. The first flyer was a piece of rattan curled & out the bobbin like a horse-shoe. The flyer itself did the spinning, and the bobbin simply wound it on. This was called "continuous" spinning, as it was not necessary to stop to wind the bobbin. The flyer attachment forms the German flax wheel.

In machines for spinning something is needed to pull out the thread, which is done with the wheel by hand; so we took up the invention of the draw roller. This is a combination of two sets of rollers (or more, according to the fineness of the thread desired). The first set of rollers, placed one above the other moves very slowly, as the wool passes through it and the second set, fed by the wool passing through the first set moves faster, thus drawing out finer and evenly the wool.

The children examined diagrams of machines.

One day was spent with Groups VIII and IX in visiting the Aurora cotton mills, where they saw the whole process from the raw materials to the finished cloth. They were taken first to the basement where they saw the bales of ginned cotton just as they were received from the south, then they saw the mixing of the different grades of cotton, the cleaning, opening, separating the inferior cotton, carding and intermittent and continuous spinning, sizing, weaving, warping, packing and shipping, - machine shop and boiler rooms.

Miss Farmer.

Cooking: Same as VI.

Art work: Made a study of the characteristic forms of the pine, oak and elm tree. *P.K.*

French: The subject for the week was gardening. The lesson was illustrated by making a visit to the garden and acting the part of a gardener. Gardening implements were used, seed was planted and weeds torn up. The children were taught to express their acts in French in the first person singular. A vocabulary and sentences were read and copied to be studied. Much stress was laid on the cultivation of ear memory and on correct pronunciation. T

The subjects and verbs of the past two weeks were reviewed repeatedly. Their entire vocabulary was reviewed by means of a spelling-match and wordgame. *P.K.*

Miss Harding.

group IX.

(History) Same as VIII.

Latin: This group has begun to read Caesar's Invasion of Britain, Books IV and V. The mode of procedure thus far has been as follows: I go over as much as I think we can cover in the hour and simplify the Latin so as to give them a clear idea of the contents. Then I read over the Latin as Caesar wrote it and the children read it over and translate it freely. I am going to have them read Caesar twice a week; the other two days are to be used for grammar work and sight work based on the Caesar we have read. My aim in the Caesar work will be to read as much as possible, but not to drill the children in the grammatical construction, nor to insist at first on accuracy. in

translation, but to have them read it mainly as history.

Miss Schibby.

Science: The seed of the box-elder was examined and facts regarding its method of dispersal and the protection of the embryo were brought out. The folding of the embryo was observed and a number of seeds were sewed to blotting paper in various positions and in such a way as not to interfere with their unfolding: The paper was kept moist under a bell-jar, and observations were made from day to day upon the method of fermentation.

A further experiment is now in progress to determine the method of germination of several common seeds, viz. beans, peas, corn, etc. Each child is conducting this experiment for himself, using a piece of glass with an inverted tumbler on it for a moist chamber, in which is kept a piece of blotting paper upon which the various kinds of seeds are placed. Notes are taken from day to day upon the progress observed. The swelling of the seeds, due to the absorption of water was first noticed; then the various ways in which the skin ruptures, and the appearance of root and shoot. The appearance of root-hairs has been observed.

A mold was noticed upon some of the seeds, which was at first confounded with root hairs. The difference was soon established, however. A question regarding the source of the fungus developed the fact that it could not have originated spontaneously, but that it must have come from some kind of germ in the atmosphere, or water, or upon the seeds.

Experiments have been started to determine the amount of water which dry sand, clay, and humus will hold, and the amount each will lose in a given time.

Mr. Moore.

One half hour a week has been spent in working out the laws of the lever, using the treadle of the spinning wheel as an illustration. The law worked out now is that-

Power arm : ~~to~~ weight arm : : the power : ~~is~~ to weight.

Miss Camp.

Art work:

Drawings primitive
Are working on the design for the music stool. They were shown ~~designs~~ of musical instruments which might be appropriate for a music bench, and the aim of a design, - the filling of space in a pleasing manner ^{was} explained. We brought out the fact that ^{as} the design must be a stencil ornament, ~~and that~~ the pleasing effect would come entirely from the elaboration of the outline. The instruments selected were those best adapted to combine in some central design.

They discussed the question of the top of the stool, - whether it should be covered with a design, or have simply a border. It was decided to make a border, leaving the central panel plain, because it seemed more harmonious with its purpose; since anything to be sat upon should have a plain, smooth surface. *C.R.*

Miss Cushman.

French:

A good deal of time has been spent on verbs, getting in all tenses of the indicative the forms of the verb *etre* and *avoir*. They have taken sentences from their other work and placed the verb in all the different tenses, and have also written the conjugation by tense and persons.

They have also taken up some anecdotes, the enigma, etc. One of the enigma's is as follows:

Voltaire et Piron etaient alles ensemble passer quelques jours dans un chateau. Un jour, apres une discussion, Voltaire quitte brusquement son ami et va se promener seul dans un bois. Piron s'est offense de cette conduite impertinante, et il est alle a la chambre de Voltaire et il a ecrit sur la porte le mot "coquin".

Une heure apres Voltaire est revenu de la promenade, il se presente chez son ami.

Piron le recoit amicalement et lui dit quel bon hasard me procure l'honneur de votre visite?

J'ai vu votre nom sur ma porte, dit Voltaire, et je viens vous rendre ma visite."

Mlle. Ashleman.

I wanted to take up the trades, but as the fathers of these children did not work at trades, we got at it through the medium of house-cleaning. Our own play-house needed cleaning, so we decided what we should need in order to clean it. We decided we should need a pail, scrubbing brush and broom. The pail was made out of heavy manilla paper and the scrubbing brush of wood with bristles of rope. The rope was fastened on with tacks and then raveled out. With the new tools the play-house was thoroughly cleaned.

To reach the ceiling they decided that something would be needed, so they made a step-lader. The wood was prepared for them and they put it together. A dust-pan and broom would be needed to keep the house clean. The bristles for the broom were made from hair cloth; the dust pan was made from soft tin. A dust brush was made from a meat skewer, feathers and wire.

The story for the week was the story of Balder. They played it and I wanted them to draw it, but they said they could not until they had played it some more.

The cooking was whole rice, moulded in cups with preserved pears.

Miss La Victoire.

O.K.

History and Science:

No work has been done in the garden except to watch it to see the progress of the plants, and clearing of stones and weeds.

For number work they have studied the clock face, finding out the number of minutes in an hour, and quarter, half and three-quarters of an hour.

They have continued a little work on the homes of the Indians, their mode of life, and why they were no longer to be found here.

T They measured the windows in room A and cut off the lengths of unbleached cotton cloth out of which they are to print curtains. They decided on the width of hem for top and bottom, and added this length to the length they desired the finished curtain, before cutting the cloth. They then turned up the hems. This was hard work for them.

In hand-work they have cut out of paper leaves the shape of their corn and bean seedlings, rolled up the paper to make stems, and pasted the leaves on the stem, making little models of the seedlings that are growing in their box. They had to observe the plants very carefully to see where to paste their leaves.

With Group IV they made an excursion to Washington Park to collect algae for the aquarium. They found snails and other water animals, and brought back some tree seedlings for the beginning of a little nursery in the school garden.

O.K.
Miss Andrews.

Sewing: Commenced work on needle books, such as were described for II.

Cooking: The object of the lesson was to find the proportion of water to cereal. The standard taken was flaked wheat, which requires twice the amount of water. One pupil balanced a cup of wheaten with the flaked preparation and found that it required three cups. The pupils were to find the required amount of water for the wheaten. I found this too difficult for the majority of the pupils.

To avoid the difficulty I had in using wheaten I took cornmeal which is more easily handled. The flaked preparation requires an equal volume of water. Cornmeal weighs five times as much as the flaked, therefore it takes five times as much water. This was worked out by the majority of the pupils in Group II. The first step in this number work was as follows: One cup of corn meal requires five cups of water. $1/2$ cup of corn meal will take $2\frac{1}{2}$ cups of water. The latter was the ~~xxxxxx~~ recipe used in the kitchen. Group I used rice in the same way.

Mrs. Baxter.

History and Science:

Have worked on their tents which are now ready to be taken out to the park. They fastened the different pieces of cloth together by making holes on the opposite edges and sewing or tying with straps of the cloth. *a. K.* Miss Hill.

The tents involved the finding out by the children of the fact that the triangular pyramid, formed by the sticks of the three pole tent, when revolved about its axis, the three points at the base describe a circle. From this they got an idea of the shape of the bottom of the cloth for the tent. They then cut out, using their small model, triangles with slightly rounded bases, which fitted each of the three sides. They then laid these three triangular shaped pieces down flat, with their edges together, and drew around the outside, getting the section of the circle needed.

The second kind of tent was made with two pieces crossed and a ridge pole between, one of the ridge poles being longer than the greatest width of the cloth, they had to work out how wide a piece would have to be pasted on to make the tent cloth long enough to fit the frame. This took some time. They next found what shape the end pieces would be, and cut out one triangle solid for one end, then cut the other triangle in two pieces so as to have the door-way in the highest part of the tent, and so it could be partly opened, and yet screened by the lapping side pieces. They finished the tents and put them up once in the yard, but found that they were not firm enough without guide ropes to stay the frame. As a class they worked out where these ropes would be placed to secure the greatest pull down on the whole frame evenly; how long they should be, and what advantage there was in fastening them out

some distance from the tent sides.

O.K. Miss Camp.

Sewing: Continued work previously started.

Miss Tough.

Gardening: Group II planted radishes and lettuce for a later crop,
a and cleared away stones and weeds from the beds.

In the experiment which they had started to find out whether seedlings would go for water or soil when these were separated, they found that the seedlings were too large, and could not grow after their environment was changed, so they got some smaller ones, and left them for a future lesson. O.K. Miss Andrews.

Number work:

Volume and area. Boxes. The pupils were given a one-inch cube and told to find how much paper it would require to make the bottom, sides and ends of a box which would exactly hold the cube. They were then asked to make a pattern of the box which they did, by tracing the squares, making nine inch squares, and then cutting out each corner square. They were then asked to find what the size and shape of the smallest piece of paper would be from which a box of this kind could be made. They were able to do this. The next step was to draw a pattern of this box beginning with the square. They were asked how many square inches they had in a row, how many rows, and how many squares inches in the whole square; how many of these squares we should need for our box, and how many and which squares should be cut away.

After cutting out the end squares they began to fold. They soon found they needed some of each corner square as a lap to paste the box. A third pattern was drawn, this time complete.

The next pattern was for a box which would hold four

cubic inches. This time the pupils could begin with the square for their pattern. They found that it required a four-inch square. One pupil discovered that there were 16 sq. in. in the square.

The third lesson was devoted to the making of a box which would hold six one-inch cubes. They found the bottom of the box would require an oblong 2 in. by 3 in, each side would be 3 in. by 1 in., and each end would be 2 in. by 1 in. A sketch of this was made on the board and the pupils found they would have to make an oblong 5 in. by 4.

One lesson in number was given to connect with their work in cooking. This work involved proportion, addition, subtraction, multiplication and division. The lesson was based on the fact that corn meal requires five times its volume of water.

Corn meal	water
1 cup of C.M. requires	5 cups of water.
2 cups "	10 " "
4 " "	20 " " etc.

One-quarter of a cup of cornmeal requires 5 quarters of water. They were asked how they could measure five quarters with a cup. They found it could be done by taking 1 and $1/4$ cups. A half cup, $1/3$, $2/3$, and $3/4$ cups of corn meal were used in the same way. When the fractional parts seemed to be too difficult I referred to the whole cups.

Mrs. Baxter.

They cooked rice preparations and made records for
cook book.

Miss Harmer.

Science: Worked in their cold frame and planted seeds for a later crop.

Miss Andrews. O. K.

History:

Following the story of the conquests of Cyrus the great, we took up the story of Alexander the great, as a conqueror who brought all the east under his control. In each conquest we located the country conquered on the map, thus making a continual review of the geography. The story of Alexander was told in about the same way as given to Group VII in the winter quarter, but as the children were more interested in the fate of Tyre, they were told of its siege, and its final conquest by Alex, the destruction of the high walls, and the cruelty shown the inhabitants, practically ending the history of the city, and the history of the Phoenicians except as it was transferred to Carthage.

The ideas which have been kept before the children continually, in the study of the Phoenicians, has been the gradual adaptation of knowledge of other peoples, increasing their own civilization; the fact that an environment apparently unsuited for life, may force a people to discover new ways of providing the necessities of life, and bring about a greater development by the action and reaction of a new stimulus; the principles of colonization; and the difference between monarchical and democratic government, - the latter depending upon the fact that the merchants were powerful, hence must be consulted in government affairs; and lastly to get the geography of the Mediterranean sea with a general notion of the continents of which the bordering lands are a part.

Miss Runyon.

History: New books were obtained for the class (The Story of the Thirteen Colonies, by Guerber), so two periods were spent in reading from them with me, and one period with Miss Lackerstein. One period was spent in writing on some curious customs of the people of Virginia, from "The Colonial Cavalier", by Maud Rā Wilder Goodwin. The rest of the time was spent in recalling again the source of wealth of Virginia, the navigation laws of Chas. II and how they attempted to evade them, and the giving of land to favorites which Virginia thought belonged to it, - the land becoming Carolina. All these grievances were seen to have culminated in Bacon's rebellion, which we reviewed.

Miss Runyon.

Science: They have continued getting a general idea of the world as a whole, finding up the time it would take to travel around the world by railroad and steamboat, then going back to sailing vessels and early means of rtransportation. Miss Camp.

They wrote a record of their experiment of last week. The rest of their time was spent in working in the garden. Seeds were planted in order to have representatives of various families. As follows: Peas and beans, (Pulse family); wheat, oats, rye, barley, corn, and broom corn (grass family); radishes (mustard family); parsley, carrots, carraway (parsley family), marigold, aster, lettuce and sunflower (composite family), thyme, catnip, sweetm arjarum and sage (mint family); flax (nettle family), hemp (hemp family); asparagus and onions, (lily family), and gourds, (gourd family). Miss Andrews. 0.15

Sewing. Finished golders for the kitchen.

Miss Tough.

Cooking: Rice cooked and records made.

Miss Harmer.

History(United States).

We have taken up the battle of Lake Champlain, the children reading aloud from "The Boys of '76". The children were asked what the obstacles were which the armies had to meet. The Americans had no fleet at all, and had to bring their carpenters to Lake Champlain and hue down trees and build boats. This side was dwelt upon rather than the actual battle.

Then we took up the battle of Trenton and the condition of the army at that time. They discussed the fact that there were only about 1700 left in the army because the continual defeat of Washington had so discouraged the men that they deserted. The children thought if he could just win one battle it would turn the tide. The problem was given them as to how Washington could hope to win with 1700 men when the English had 10,000. They concluded that if the English army could be broken up into parts, he might beat each part. We

then went to the books, and they saw that Cornwallis rather ignored the American army, now that the numbers had grown so small, and thought there was no hurry about crushing the remnant, and so he divided his army into sections, so that it would be easier to provision them through the winter. About 2000 were stationed at Trenton, a small detachment at New Brunswick, and another at Princeton. The children were interested in the Manoeuvres of Washington in Crossing the Delaware.

Miss Bacon.

Science:

In working out the relative diameters of the earth and the moon the class has finished their clay models in the right proportions, and have marked the meridians and parallels, in some

cases, and in others the different zones. They have worked out the size of the diameter of the Sun's ~~orbit~~ in relation to the diameter of the moon's orbit around the earth, and have found that if the earth were at the center of the sun, and the moon three times as far from the earth as it really is, it still could revolve inside the sun's atmosphere, because of the great size of the sun. Miss Andrews. *OK*

Number work: This was in connection with the science work with Miss Andrews. They found how many times larger the diameter of the sun is than that of the earth, the moon, or the moon's orbit. They then drew a circle representing the sun and another in proper proportion to represent the orbit of the moon. *OK*

Miss Hill.

Some work was given to gain rapidity in adding and subtracting. They were given the subtraction of large numbers in which some of the digits of the subtrahend were larger than those of the minuend. The figures were applied to United States money so that they were able to see that one of the second column from the right was equal to ten of the first column, and one of the third column was equal to ten of the second, etc. They learned to borrow or take from the next higher column when necessary.

They also did some writing of numbers and learned the value of zero. Mrs. Baxter.

Sewing: Started design work on pin cushion covers. Miss Tough:

Beside the regular work as laid out in the course we had two lessons on the fibre. In the first lesson a number of samples of cloth of the different fibres, cotton, linen, silk, and wool were given to the pupils to be examined. They were all able to tell in most cases what fibre was used in the

manufacture of that particular cloth. Next I gave them the raw fibre and asked them to find the fibre that would be chosen first by people in early times. They picked out the long wool, and when I asked why they had chosen that, they said because it could most easily be twisted. At this point I found two boys eager to tell their experiences on sheep farms. One had been in Wyoming and the other on a small farm in Kentucky. This brought out the two types. The boys were able to tell about the salting, shearing and care of sheep in general. They found that the unwashed wool felt very greasy. I told them that there was something in the fat that would make a good soap with which to wash the wool. One of the boys had seen soap made from the lye of wood ashes and fat, and spoke of it in this connection.

In the second lesson we took up the carding and spinning of wool and measured the length of the fibre. They chose the long fibre for spinning. The idea of carding the wool was brought out and the development of the simplest appliances up to the hand cards. The pupils then began to spin and found that they would have to wind the thread on something. Mrs. Baxter.

Group VII (a)

History (U.S.) Same as VI.

Miss Basch.

Latin: Have written the words of the four things they have studied in their dictionaries by way of review. Also have printed the Remulus and Remus story, the story of Cornelia and her jewels. They have begun the Horatius story. Miss Schibsky

French: Farming was the subject for the week. Having studied gardening recently much illustration of the vocabulary was not necessary. Sentences describing the acts of a farmer were read and written with special stress on the cultivation of ear and muscle memory. What had been translated from French into English the day before was given in English to be translated into French. New sentences were given daily with words which were not in their vocabulary, so as to teach them to infer what the meaning of words must be from the context.

The imperfect of the verbs avoir and être were studied, and attention was called to the correspondence between their endings. At the end of the week they were given a review on sentences and their general vocabulary. Miss Harding.

O.K.

Group VII (b)

Latin: Have studied the first four kings of Rome with a view to filling out our history of early Rome. The study has been conducted in the usual fashion. Miss Schibsky.

History: The Life of De Soto had been finished, bringing out the reason for his exploration and the significance of the discovery of the Mississippi. We noted the cruelty with which the Spaniards treated the Indians, in order to contrast it with the French method of dealing with them.

In preparing to study the history of the northwest, we have