

## Pioneer Work:

- I. Examined clothing ( woolen  
 ( cotton  
 ( silk  
 ( linen.

## II. Examined fibres:

- (silk - methods of obtaining fibre.  
 1. Animal (wool - parts used  
 2. Vegetable (flax - parts of plant used  
 (cotton- method of obtaining fibre.  
 3. Countries showing large cultivation of fibre,- getting  
 in a general way the climate best suited to each, as:  
 (a) Wool-- western prairies- food, water.  
 (b) Cotton--south--warm climate, sunshine.  
 (c) Flax-- northern states.  
 (d) Silk-- China.

4. Selection of fibre best suited for spinning= wool.

III The cleaning and carding of wool by hand, getting the principle  
 of first drawing out the fibre to requisite fineness then  
 twisting to form the thread for spinning.

IV. Spinning wool with simple spindle made in the shop. Shows  
 mechanical action of machine work.

Why the machine is prepared:

1. Less labor,
2. Larger quantity produced;
3. The twisting being done by spindle-the hand was left  
 free to draw the fibre in finner strands and a better  
 thread was produced.

The children did the work and drew the inferences given above.

## V. Study of fleece:

1. First shearing-- lamb's wool. Difference between lamb's wool  
 and wool from older animals.

2. Method of shearing-- ~~lamb's~~ wool: In America a band of expert men. In India; contracts are made and men travel from ranch to ranch.

3. Season for shearing (a) warm countries (b) cold countries.

4. Shape of fleece.

5. Weight

6. Relation of quality of different parts of fleece.

7. Wool sorting:

1. Softer wool-- fine yarns.

2. Peltings,- wool from legs= coarser yarns.

Miss Harner.

Art Work:

Music: Have worked on Group song and begun to name its melody.

**History:**

So many of the Group have been away because of illness that the regular work has not progressed very fast, more time being given to reading and looking up places on the map.

Some further talk about ships brought out the difficulties of launching, the need of docks and harbors, the fact that the sailors did not have a compass and were afraid to venture out of sight of land. Then we made up a story in which "Hiram" and "Shalman" went down into Egypt by water, selecting their rowers, provisioning their ship which was the first with a rudder and sails. We imagined the adventures of the sea voyage for which they had no pilot, and brought out the duties of a pilot. They were supposed to reach the Nile when it was at its height, and sailed down to Memphis. Here they learned the facts about the Nile overflowing its banks every year, and its bringing down the alluvial soil, and how this is used by the Egyptians. They saw the sphinx and the pyramids, and found out what they were for. Recalled the Hebrews "making bricks without straw", and were told that it might have been for the making of pyramids. The phoenician youths saw here the making of glass which they investigated, and the one from Sidon decided to introduce it into his town and win as much fame by his glass making as Tyre had by its purple.

Miss Munyon.

**Science:**

Those who cannot tell time have begun to construct a clock face of card-board, using copper wire for hands. One half hour was spent in this. The rest of the time was spent in discussing the various zones of the earth and localizing them in general as the effect of more or less heat from the sun, giving

longer and shorter days. The different animal and vegetable life in the different zones was discussed in general. Pictures were used and stories by teacher and children. Miss Camp.

Reading Lesson:

Paul Hunter: Hello, I have just come back from Tyre.

Albert: How is H<sup>1</sup>ram? I heard they had found a new color in Tyre?

George: A new color? What kind of color?

Hugh: I have heard about it. It is a sort of purple, and they get it from a shell fish in the sea.

Isabel: What kind of a city is Tyre? Tell us all about it, Shalman.

Paul MacClintock: Tell us about the color!

Paul Hunter: Well, you know I have been planning to go and see Hiram for a long time. But since I have been helping my father, I have had so many trips to make to Damascus and other places that I could not go down the coast. But when I heard of the new dye they had found, I thought I must go. Tyre is built on a rock, and is an island. They have to take all their drinking water there in skin-bottles. But they are planning to build an aqueduct. I was surprised to find that Hiram's father has built a great many ships. I know he has been trying to do this for some time, but the sea is so rough that they are often wrecked. His men are making quite long journeys on the sea, but they are afraid to go far from the coast.

Susan: What do they go for?

Paul: They need tin and copper to make bronze. They make beautiful things of bronze. Then they need wool and wheat and lots of things. Tyre is only a place to make over things, - to manufacture them? They have to get all their materials by trading. (Planned in part by the children).

Music: Have begun to analyze the scale and to discover why it is composed of whole and half steps. Mrs. Kern

Art work: I read then a description from Hiawatha of the peace pipes. They were very much impressed by the poetic side of the story,- the clouds of smoke ascending from the mountain as a signal to the nations. They began an illustration showing the mountains and the smoke arising and the tribes coming together. Miss Cushman.

## History:

One period spent in reading, one in writing. The rest of the time we discussed the dissatisfaction in England over the failure of the colony to yield a profit to the London Company, or even support itself. We again took up the reason for this failure in the colony, and brought out the fact that the ground, covered with forests, was difficult to clear for agriculture, and that the colonists did not know the Indian method of encircling the tree with a knife in the spring, removing the bark and thus killing the tree; also that they attempted to raise English wheat, and it was only due to John Smith's insight that the method of planting Indian corn was discovered and adopted. The character of the earlier settlers was again brought out, and the reason for the command of John Smith, "Those that will not work shall not eat".

We next took up the result in England in the planning of a new charter, sending over a governor, granting 400 miles more territory along the sea coast, and from "sea to sea", and the new impetus to colonization, nine ship-loads starting out. The wreck of the ship containing the Assistant governor and admiral (Gov. De La Warr) not being able to go at once) on the Bermuda islands where they were detained nearly a year, and the "Starving time" in Jamestown, from which Smith had departed. The arrival of the people from Bermuda in ships which they had made, and the decision of the colonists to return to England was brought out, and the arrival of Lord De La Warr just in time to prevent the abandonment of the colony.

Miss Runyon.

## Hand-work:

Continued map of Virginia. They drew the outline on the board from memory. Miss Hill.

Pioneer work: Cotton ginned by hand. One half oz. was ginned by eight children in twenty minutes to be used in quilt for colonial bed. We talked about states where cotton is grown: (1) Gathering cotton, (2) Ginning, (3) baling,- number of pounds to the bale and the method of compressing. (4) Transporting to factories (a) to the north by water, (b) by rail.

## Cooking:

Wheat reviewed. Records compared and average taken.

Prep.	Amount of water	Time to cook:
rolled	2: 1	20 minutes.
ground	5: 1	45 Min.
Cracked	4 1-2: 1	1 3-4 h.

Corn compared with wheat: Preparation balanced on scales and compared to find out amount of water required. Flaked corn: rolled wheat :: 1 : 2 therefore twice the quantity was required. Flaked corn : corn meal :: 1 : 4 1-4. Flaked corn compared with rolled wheat as to (a) texture, (b) Amount of cellulose, (c) method of preparation in factory. Miss Harmer.

## Science:

In discussing the result of their experiment to find whether plants took food from air expressed some doubt about air having appreciable weight; so to find out if the weight of the air was great enough to hold up water,- which they called heavy- they inverted a test tube filled with water into a large pan and found that the water did not fall down, but if a little air was



let into the tube some water was forced down. This was the only experiment which we could try with our apparatus, but they were told that if we had an air tight vessel from which we could exhaust the air, they would find that it weighed much less when the air had been exhausted.

To find out how much of the 8 g. gained by the growing bean was due to salts dissolved in the water, the children weighed a beaker and put as much water into it as was given to the plant, then evaporated the water and weighed the beaker again and found that it weighed only 1-10 g. more than before. The children wrote a record of the experiment and read aloud all of their records written this quarter. They commenced diagrams to a scale for some insect boxes to be made in the shop.

Miss Andrews.

Music: Same as last week.

Art work: Continued work of the previous week,- the drawing of the gymnasium, placing themselves in relation to the room.

Miss Cushman.



## History:

We did not go into all the battles of the French and Indian wars, because the boys had an idea that history was just a series of battles, so I wanted to skip over that and give them an idea that history was a development, and to arouse their interest in the social and economic side of things. We took up Braddock's expedition and defeat so that they would get an idea of the difference between the English and American soldiers and how the Americans came to feel their power and the possibility of their doing things. We found the natural connecting links between the French and English dominions, - where it would be best to fortify. Then we have gone on to the growth of independence in America! the reason for the passing of the stamp act, and the navigation laws, and are now taking up how the people received it.

I read to them one day from James Parton's "First battles of the Revolution", telling how the colonists met these acts. Three periods were spent by the children in reading from "Stories of the Thirteen colonies" by H.A. Guerber and from "Childrens Stories in American History" by Wright. One period spent in writing. (In taking up the placing of the forts they got a pretty good idea of the rivers in the middle and eastern states.)

Miss Bacon.

## Cooking:

Continued study of vegetables: Onion-- representing class of vegetables with strong juices; celery, - sweet juices, mild flavor. Flavor and odor due to pungent oils. Onion having too much flavor was cooked in large quantity of water; water removed and fresh water added after first ten minutes. Onion cooked without cover to permit gradual escape of odor. Celery cooked in

small amount of water with cover on. This water was used with the celery to flavor the soup. Half the class prepared onion soup, half celery soup.

Miss Harmer

#### Science:

To find out whether the barometer tubes could be made of any size tubing without affecting its length the children experimented with different size tubings, partly filling them with water. The tubes were connected at the bottom so that any change in the water in one tube would be felt by the water in the other tubes. The children, finding that the water always stood at the same level, no matter what its size, were convinced that the barometer could not be made shorter if the tube had a larger diameter. Records of this experiment and study of weather maps took up the rest of the time.

Miss Andrews

Sewing: Work on wool as given for group III

Music: Same as last week.

Art Work: Same as group V.

French: Vocabulary in connection with sewing:

Je couds, je brode,; le lacet. Avez vous, marchez vers l'armoire; prenez le tablier; mettez le tablier; marchez vers la table; asseyez vous. Prenez le sac a' ouvrage; ouvrez le sac a' ouvrage; prenez le doigt; mettez le doigt sur le doigt du milieu.

More of the poem was learned, and a general review of the previous week's lessons in sewing.

## History:

After a general discussion of the types of negroes, both in this country and in Africa, giving the head measurements as a means of telling race-- we took up the Pygmies. The facts for this were obtained from "The Pygmies" by Quatrefrages-- translated by Prof. Starr, and an article in the Nov. '98 number of the Anthropological Journal by Capt. Barlow (?)

The reason for taking these people, and the cannibals is to enable the children to know something about the two classes of Negroes in Africa of whom they are most likely to hear when Africa is mentioned. The Pygmies were taken up in regard to stature (Average four feet) method of living in bee-hive houses formed of clay or mud and straw,- as a nomadic tribe, but always asking permission to settle on another tribe's territory; their weapons, food, dress, etc. The feeling that the pygmies have against stealing was illustrated by the custom of selecting from a plantation a bunch of bananas, yet always leaving in its place a package of meat- regarded as payment. The children were asked whether they thought this justifiable. All at first thought that the practice was perfectly right. They were asked, What if the owner of the bananas had plenty of meat, and wanted the bananas, and by other illustrations led to see that value attached to anything must be an agreement. The papers written were in most cases satisfactory so far as memory of the facts was concerned, but several were lacking in sentence structure and spelling, and in order to give these children personal help, I excused the three who had fewest mistakes and let them read aloud the article in the Journal. They found some hard words, but enjoyed the attempt to read the facts for themselves.

Miss Runyon.

**Latin:**

This Group has finished the story of Horatius and his fight against Porsena. It is now working on the story of Scaevola and Porsena. The mode of procedure is the usual one with as many attempts as possible for preventing monotony. The story is the same that has been reported for group VIII only slightly simplified.

Miss Schibsbys.

**Art Work:**

They have begun to illustrate the life of the school. I took them into the Gymnasium and we talked about the horizon line and the perspective and I made a drawing showing how I should go to work to draw an interior.

Miss Cushman.

**Botany:** Study of methods of cross pollination in orchids canna blossom and chinese primrose. Discussion of the effect of cross fertilization of the ovule upon the next generation and the changes in a plant due to union of the two elements unlike parents of the same species.

Miss Andrews.

**Mechanics:** Wrote out results of experiment with pendulum. Found out what number of vibrations per minute should have been for 4 ins. Length.

Miss Hill.

**Cooking:** Same as VI

**Hand work:** Basket making.

**French:**

Continued the poetry of the bird at the window, learning it by heart. Took up the same vocabulary for sewing as with other groups. Began learning to tell how to make candy. One child's record is as follows:

Je veux faire des bonbons.

J'allume le gaz avec l'allumette. Je jette l'allumette dans le panier. Je prends le sucre, le chocolat et le beurre et le lait. Je mesure le sucre. Je mesure le lait, le beurre dans la petite tasse. Je mets le sucre dans la casserole. Je verse le lait sur le sucre.

Je prends la casserole et la tasse. Je mesure deux tasses de lait. Je mets le lait dans la casserole. Je mesure deux tasses de sucre. Je mets le sucre dans la casserole. Je mesure un quart de tasse de beurre. Je mets le beurre dans la casserole. Je mets la casserole sur le fourneau. J'allume l'allumette. J'allume le gaz. Les bonbons bouillent. Les bonbons sont faits. Je refroidis les bonbons. Je coupe les bonbons, Je mange des bonbons, je fais circuler les bonbons.

**Music:** Continuation of last report.

## History:

Have been going along the same lines as IX They are now at the second enterprise--the holding of the Mississippi valley and establishing a colony at what La Salle supposed to be the mouth of the Miss. Miss Bacon.

## Cooking:

Tomato soup as given to VI and VII last week.

## pioneer work:

Studied wool fibre.

1. Structure: A series of overlapping scales. Long wool and short wool compared. Both examined under a microscope to see difference in structure. The long wool was found to be smooth like hair, scales flat. The short wool scales easily seen, stand out at right angles from the fibre.
2. Action of water. In short wool there are large air spaces between scales which are replaced by water, therefore a very large quantity can be absorbed, so a soft wool would not be selected for a rainy day. clothing. In long wool the scales being flattened to the surface, the water runs off; little is absorbed.
3. In relation to warmth. The short wool holds large quantities of air, and this being a non conductor of heat prevents the radiation of heat from the body. A fine soft wool is selected for warmth. A long wool selected for rainy day clothing. Samples of woollen cloth are to be brought by the children and examined for long and short fibres.

## Science :

Have constructed a volcano in sand, an eruption being brought about by means of a mixture of sand, soda and sulphuric acid.. The rest of the time was spent in a discussion of the effect of heat upon different substances, carrying out the work they have been doing on the interior condition of the earth.

Science: made oxygen by heating potassium chlorate with manganese dioxide. They first heated these in test tubes and let a spark drop in when oxygen evolved. Then set up apparatus for getting larger quantities and tried the effects of oxygen with sulphur, charcoal and splinter of wood. Miss Will.

Latin: Have taken up the story of Sir Walter Raleigh and Queen Elizabeth and have begun the story of King Alfred and the peasant woman. Both are taken from the "Gradation". We have dwelt on the uses of the subjective, objective and possessive cases and their form in the first three declensions.

Number work: (From the beginning of the quarter)

Problems in connection with work in science were taken up. They had studied the formation of the crust of the earth by cooling and found that the wrinkles formed in cooling were mountains. They were discussing how big the mountains were, and we began a problem to estimate them in terms of the radius of the earth. Mt. Everest in the Himalayas was taken, finding out the number of miles in 29,002 feet, and then proceeding on the basis of 5 miles (= 29,002 feet) to 25,000 (Radius). The result was used to find out how high proportionately such a mountain would be on a globe 25 miles in circumference. feet



To the more advanced members of the class this was differently stated. They were to take a globe about 25 ft. in diameter and find its ~~diameter~~ circumference for themselves, and find out how high that mountain would be on its surface. They found that it would be 1-5000 of 25 ft, and by reduction that this would be 1-200 of a foot, which they reduced to inches, = between 1-10 and 1-20 of an inch.

They took up also the various means of erosion, and selecting a very rapid method, calculated how high Mt. Everest would be after 1000 or 10,000 years. Several problems were taken up in regard to the increased temperature of the earth toward the center. They were given the rate of 55 to 60 feet = 1 degree increase, and estimated the depth at which various substances would become liquid and gaseous.

Music: Same as last report.

Art Work: Are working on large sheets of paper from models, using charcoal paper. One of their number poses each week in fancy costume.

Manual training:

Are at work on block to illustrate different styles of architecture. Also block to illustrate the fulcrum and lever. Some are at work on a quilting frame for the colonial room. One is making a stamp box to hold stamps of different denominations. The box is cut from the solid wood, and brings in planing across the grain to an angle, and the use of screws and hinges.  
Mt. Ball.

French: (Composition)

La mère: "Oh! mon petit garçon, voulez vous faire une boîte? Voici votre scie et une planche. Cherchez votre marteau et des clous et le banc. Maintenant je vais coudre un tablier pour moi même. S'il vous plaît, donnez moi mon sac à ouvrage. merci. Maintenant, cherchez la s'il vous plaît, vite.  
(Son in work room alone): pour faire une boîte, je prends la scie et la planche. Je scie la planche en cinq morceaux x. Alors je prends le marteau et les clous. J'enfonce les clous dans la boîte. Voici la boîte.

## History: (U.S.)

Have finished the life of La Salle as given in Parkman, the children having read it themselves. We took one period to find out the great things that La Salle attempted (1) that the Mississippi was not the north-west passage to India, and (2) exploring the country and claiming in it the name of the king. We took up the forts built, and how he attempted to hold the land, by getting the king to grant supplies and founding of colonies. The reason that he failed, brought out by the children-- that attempted to hold too much territory, and because of the material of which his colonies was made. We summed up the work of the last six weeks, bringing out the important things, and relating the details to them. One period spent in current events. The children are watching the developments in the Philippine matter and the Nicaragua canal.

Latin: During the last two weeks the time has been spent as follows: We have taken up the poem by Catullus and the group is memorizing it. I can't say the experiment is a success. The poem is much more intricate than anything we have had yet, and the children do not seem to have much desire to learn it. They are getting it gradually, however. In grammar work we have done some more with the verb system. We have now studied the first four tenses of the four conjugations. In connection with this work mainly for the sake of illustrations and practice in translating at hearing in Latin, I have given them a couple of easy Latin stories based on English stories they already knew.

Science: Spent the time in ~~making~~ constructing outline maps, one of the archæan, one of the cretaceous and one of the silurian and tertiary periods, to show the relative distribution of land and water at these periods. (taken from Dana's small geography.) This was individual work. The remaining members of the class were working on large outline maps, one of America, and two of the U.S. showing the distribution of mineral and vegetable products as dependent upon geological distribution of rock, and the first formation of soil suitable for varying agricultural purposes.

Miss Camp

Number work: They have finished their work in finding the volume of the earth and are now working on that of the moon.

Miss Bacon.



Owing to the cold weather in many of the groups the attendance was so small that the work had to be repeated the next week.

### History:

The children played a game with blocks. One member of the class was chosen as store-keeper and the two inch blocks were used as money by the rest of the group who were building a house. As they needed blocks for certain positions they would buy them of the store-keeper, paying as many two inch blocks as was necessary to make up the value of the larger blocks needed. One of the children wanted a five inch block and had great difficulty in paying for it with two inch blocks, but finally discovered that if he bought two five inch blocks he could pay for it.

They boiled rice to find out how much water was required to soften it, working with half cups as the unit. They added the water a half cup at a time, and found that it would take four half cups to soften half a cup of rice. They worked out number work in this connection in different amounts. They illustrated a Japanese story with charcoal and paper. Continued the construction of the house. Miss Andrews.

### Groups II and III.

Made moulds in clay for leaden dish. Also made molds for weights. These were made of which which was prepared by sifting through a coarse cloth. This is connected with their history and story of the early metal workers. Miss Hill.

Number work in connection with rice, comparing the volume of whole rice and flaked rice. Miss Andrews.

## History:

only two periods, because of the absence of the whole class on one day, and all but one or two on others. First period spent in taking up more in detail the manufacture of glass which was one of the great arts of Sidon. The composition of glass was told and the ~~great~~ superiority of the Phoenician glass attributed to the fiber sand which they found on their coast. The method of mixing metal and metal oxides with the glass and producing colors was given. This was made clearer by colored plates from Perrot and Chipiez's "Art in Phoenicia," Vol. II. On period was spent in retelling experiences in Egypt and in bringing in for the first time the Phoenician religion-- Baal worship. The children were told the ancient idea of a god having a certain locality under his protection,-- that he could not go outside this district except as his image was taken, and the practice of the Phoenicians of introducing Baal worship. The sacrifice of children to Baal was mentioned in order to contrast later with the Hebrew religion.

## Cooking:

Took up the study of wheat, discussing locality of growth, appearance (1) on stalk (2) after threshing. Then the use of the straw, husks and grain,-- the whole crushed and rolled grain.

Miss Tough.

**Science:**

Read their records aloud and wrote the records of the experiment of the evaporation of water. They made some diagrams for boxes for holding cocoons. The boxes are to be made in the shop.

**History:**

Lord De La Warr's arrival at the colony, which had decreased from four hundred in the fall to 60 in the spring. The fact that his timely arrival had prevented the abandonment of the colony was brought out. He determined to do two things, place the colony on a firm basis and explore the country for gold or way to India. He set hours of labor, introduced new methods of agriculture, rebuilt the houses and forest, but kept the old system of having all things in common. All the picturesqueness of the nobleman in the wilderness surrounded by his little court of retainers, his kind benevolent form of government, was brought out; also his firmness in dealing with the colonists and with the Indians. And the regret that at the end of ten months illness--due to the unhealthy location of the colony compelled his return.

**Science:** The geography of Virginia was taken up in ~~xx~~ and they found out the direction they would have to travel in going from Chicago to Richmond, Va. and the number of miles. Also what states are in the same latitude. Miss Hill.

### Science:

Wrote a record of how they made their thermometers and took reports of the weather, recording the temperature the atmospheric pressure and the direction of the wind and the state of the atmosphere, whether cloudy or fair and compared their records with the official weather report when it came. Miss Andrews.

### History:

We have taken up the attitude of Pitt toward the colonies in contrast to that of the king and the parliament. They had supposed all England sympathized with the Parliament and were against the Americans. We have gone on studying the results of the stamp Act and the navigation laws, following out the enforcement of the navigation laws, leading to smuggling, and this to the search warrants which the colonists objected to. We took up also the quartering of the troops in Boston to carry out these laws and the resentment of the people. I have been trying to give them the idea that it was not just the paying of the money that was objected to, but the feeling that it was taxation without representation. The last two days the children have spent in formulating what what has been gone over, giving it first orally and then writing it out, - from the end of the French and Indian war to the Navigation Laws.

Miss Bacon.

### Sewing:

Drew designs for centers and borders for canvas holders for use in the kitchen.

Mats.

## History:

One period was spent in reading to them parts <sup>from</sup> of du Chaillu's travels among the cannibals, showing the ~~cannibals~~, method of hunting elephants. This was done because the method shows a degree of organization of the white tribe for a specific end, and because of the value of ivory in trade. One period was spent in showing in general the custom of trading among the natives, bringing out settled rules of conduct.

The rest of the week was spent in locating the possessions in Africa of European countries. After finding that Spain, Portugal, France, Italy, Germany and England either held land or had a "protectorate", we took up the way in which England had gained this. (1) In Egypt, which pays tribute to Turkey, but because of the large investments of English money which the Egyptians could not pay, ~~xxxx~~ a large part of the shares held by Egypt in the Suez canal were turned over to the English. To protect their investments, therefore, it was necessary for them to restore the Khedive in 1882; (who had been deposed,) and to maintain order, to reconstruct the army and officer it with Englishmen. The fact that the English in Egypt affects the Eastern question, and that any proposition for a European conference is not favored because of France's attitude toward the English in Egypt. We took up briefly Cecil Rhodes venture in south Africa, - the death of Gen. Gordon and affairs in the Sudan, - mentioning Gen. Kitchener and the recent expedition. This last was done chiefly by questions to find out how much the children knew. The names of Kitchener, Gordon and the Sudan were familiar, and the up-to-dateness of the subject aroused interest.

Miss Runyon.