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NORMAL PENNANT

COMMENCEMENT

1902

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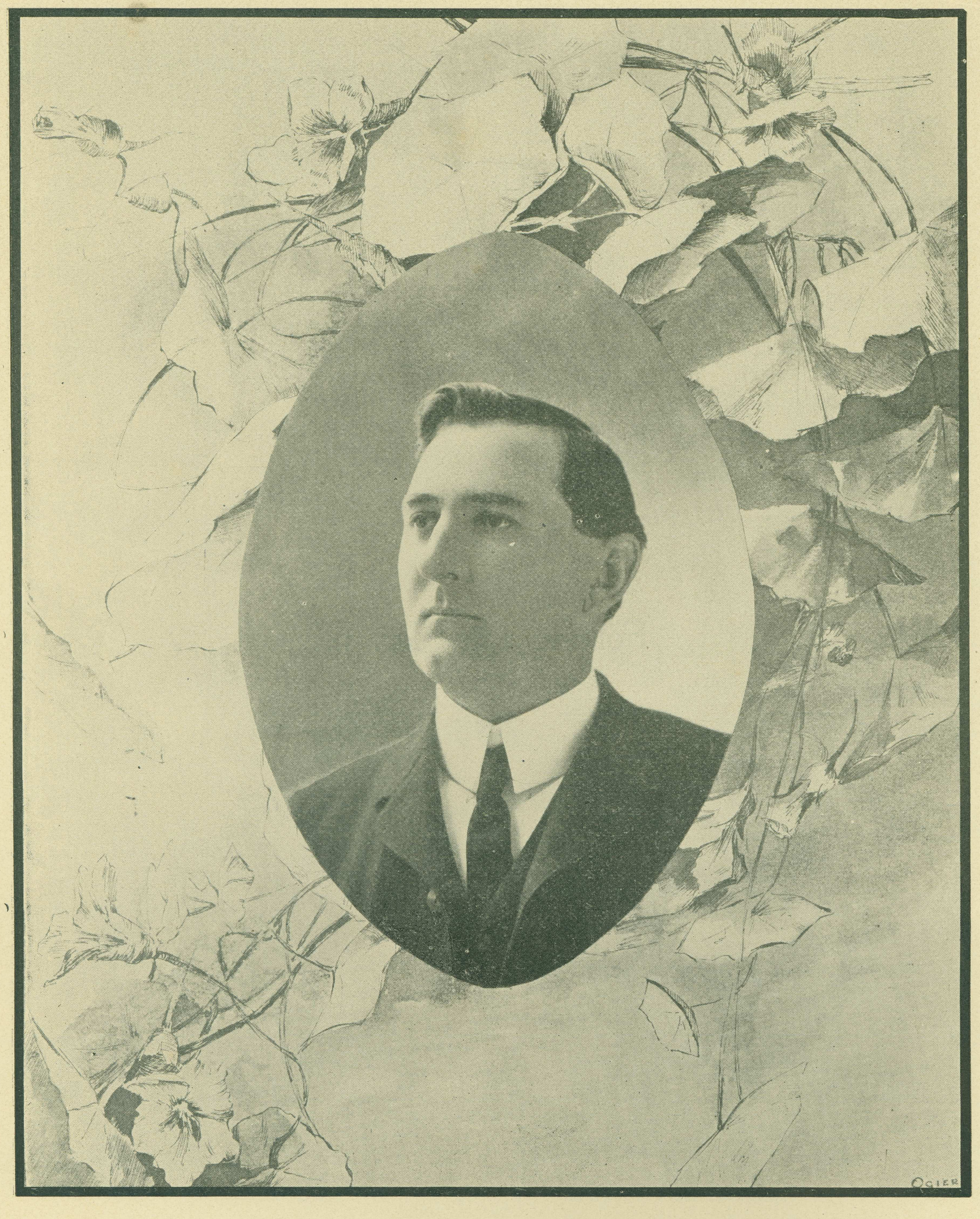
Nell Flanders
June 1902.

"Follow The Gleam."



MORRIS ELMER DAILEY.

THE
NORMAL • PENNANT.

VOL. V. SAN JOSE, CALIFORNIA, JUNE 21, 1902. No. 10.

Is It Worth While?

"The thing that hath been it is which shall be; and there is no new thing under the sun." So wrote the pessimistic "Wise Man" of the Orient, who had tried all things in succession and grown weary of them all.

Doubtless, in like fashion, we seem to the world, and possibly to our own teachers, "just another graduating class"—just another of the endless succession of classes that have gone out and that will yet go out into the great world, to lose their class identity in the innumerable army of the world's workers.

But what matters it that nothing is really new, if only we see with new eyes? What matters it to us that a host of classes before us have published class papers, written histories and prophecies, chosen class mottoes, discussed the vital subject of graduating dresses, and, finally, marched in state to the platform on the closing day to receive their diplomas? That was *their* day; this is *ours*. To us our graduation day will ever be one of *the* events of our lives; and all its attending experiences, from the quiver of suspense over the momentous question "Shall I get through?" to the final thrill of triumph when the coveted "sheepskin" is at last put into our hands, are to us as new and important as though the old, old fashion of graduating were a new invention to the world, like wireless telegraphy.

So, come with this *new* class and enjoy with us our closing Normal days. If you are one of the Alumni, live again the pleasures of your graduation week; if you are an undergraduate, see in anticipation the reward of your own labors, and so appreciate the better your school days while they last.

X.

June Class of 1902.

"Follow The Gleam."

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CORDELIA HAYES, Vice-President,
CLARA GLASHOFF, Secretary.
MAMIE BAKER, Treasurer.

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HISTORIANS;

DAISY V. E. BOWEN AGNES HOEY

POET:

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Elsie Viola Wiley
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Bessie G. Williams
Clarence Walter Wilson
Henrietta Wolford
Ethel Lucinda Wood
Elora Olive Yancy

Class Poem.

"FOLLOW THE GLEAM."

As we stand in the light of the sunset glow,
Watching the golden gleam,
Comes the thought that our school days are over and gone
All too soon as a passing dream.

Those dear happy hours all too swiftly have flown,
And now at the close of the day,
As we gaze at the sun sinking low in the west,
How ardent the wish he would stay!

Ay, tarry yet longer 'mid life's halcyon scenes
Where Friendship and Youth hand in hand
Are gathering the blossoms of Science and Truth,
That knowledge may crown our fair land.

For Knowledge is Power, and Truth is of God,
And he who possesses the twain,
Ah! well may he brave every danger and foe,
A victor o'er toil, strife and pain.

Dear classmates, the sun of our school life has set,
And tho' Fate may our pathways dissever
As to-day we go forth to the battle of life,
Yet Friendship unites us for ever.

Yes, comrades, our beautiful sun has gone down,
And our school days have passed as a dream.
Yet the Star of Ambition still beckons us on,
Arise! Let us "follow the gleam."

—L. F. McKIERNAN.

L. F. McKIERNAN
Class Poet.

HISTORIANS AND PROPHETS.

Daisy V. E. Bowen
Mary F. Sullivan

Nellie I. Flanders
Agnes Hoey

Olive Ruth Beckington

Class History.

'98-02.

(Agnes Hoey.)

"The remembrance of past labors is pleasant."

All historical eras close with a summary of the joys and hardships of their heroes, and it is in accordance with this fact that the history of the class of June, 1902, has, as a bond between it and the following generation of like heroes, something that will serve for their future renown. Since some one day marks the beginning of the recorded glory of the honored people of past times, so August 29, 1898, marks the beginning of the history of a band of people whose honor will be so widely spread that it will be recorded in lands both far and near.

On that eventful day we, the members of the present graduating class, were ushered before those who directed our registration and gave us advice which, at that time, was far beyond our comprehension. This process over, we each received that object which entitled us to enrollment in the 1 B class—an admission slip.

The first great shock we timid little Freshmen received was when we first entered the Assembly Hall. We were amazed at the sounds which greeted our ears. Never before had we heard so many people talking at once—each one seemed to be making a decided effort to say more than any one else in a limited amount of time. But, strange as it may seem, it took only two days for us to become accustomed to this noise, and, from that time on, we seemed to display a remarkable tendency to add to the tumult. This fact has been verified on numerous occasions.

Many were our troubles during the first two weeks. Like all other new students, we had great difficulty in locating the different recitation rooms, and on several occasions we were found on the upper floor in a vain search for Room L, supposing, of course, that we would find it some place near Room K. Many of us thought that the library was a place that we were not allowed to enter, and during the first week we passed the door quietly, not daring even to look in. By the end of the first month, however, we had overcome this timidity, and we learned to use the library, not only as a study room, but also as a place for social conversation. Still the members of our class have received very, very few reprimands from the librarian, and never has the name of any of our number appeared on the little book which she keeps at her desk.

One of the most pleasant social events of our first term at school was the reception which was given in honor of the new students by Prof. and Mrs. Randall a short time after we entered. We all attended this because we were honored to feel that it was given for us alone, and this enjoyable affair proved an occasion for us to become acquainted.

We learned some very interesting things during our first five months at school. For example, in the Algebra class we succeeded in proving that one equals two, and in the Drawing class we learned the great value of following the instruction, "Draw what you see."

We had always been accustomed to devoting five days of the week to school work, but when we studied zoology we added another day to the former five, as our Saturdays were spent in taking long walks collecting grasshoppers and other specimens for our class work. This extra amount of labor will prove very beneficial to us in after life because, as a result of our untiring application to study, we are able to tell the difference between a frog and a toad.

At the end of the first year we were overjoyed at the good records which we received, and when school closed we went to our homes wishing that there never was such a thing as vacation, and hoping that some kind person would some day see the value of establishing a summer school in connection with the Normal. This desire was due to the fact that our work at school had enkindled in us an ever-increasing love for knowledge. But we kept up our studies during vacation, and when school opened in September we all exhibited an eagerness to begin our second year's work.

Now we formed the habit of coming to school every morning before eight o'clock and remaining until after five in the afternoon. One of these extra hours was spent in copying Physiology notes from the board. This labor never became wearisome, because we were always rewarded for it by a sweet smile. Besides this, we devoted an unusual amount of time to our Manual Training work and finally succeeded in becoming familiar with the methods employed in finding the areas of frustures of cones and pyramids.

When we took Psychology we made extensive studies on the subject of "Insanity," in which studies we

were greatly encouraged by our instructor, Prof. B. In our Rhetoric class we became accustomed to being *scared to death,* because we always experienced a sensation of awe when we were called upon to read an especially good paragraph. Here many of us became adepts in a new art—that of writing poetry. At first many felt reluctant at trying this method of expressing their thoughts, but soon inspirations came, and many and varied were the results of our attempts along this line.

Now we began some of the most interesting work in our entire Normal course. Pedagogy was a delight to all, because it presented so many opportunities for individual work along the line of child study. Instead of discussing the question verbally, we experienced the practical demonstration of a child's recapitulating the life of the race, and the censured simplicity of the thoughts which we expressed in other recitations was due to our association with infant friends. The salient points may not be evident, but—*that's all.*

The first time that we learned to feel the gracefulness of figures on paper, and to see *delicious purples and reds* on such objects, was when we received Miss Vivian's teaching in Art. The results of her instructions affected us in various ways, and we managed to get desired effects, either with or without color. Many were the hours spent in observing the direction, construction, dimensions and surroundings of the avenues, but this observation had a somewhat twofold value, as we were at this time taking Nature Study. No longer could we enjoy the sentiment of the song, "I Hate to Get Up Early in the Morn," and one of the results of our midnight and daybreak observations was the discovery of a new planet, O'Ryan (Orion).

When we were initiated into the mysteries of the indescribable occurrences of this world, we found that the instructor of these physical principles had entered into an agreement with Mrs. Rousseau to lighten her burden of instructing students in propriety when he forbade Mr. R. to sit with his sister in class. The study of the telephone was a very valuable one, for, as a result of it, Mr. F. learned to recognize voices when transmitted over the wire.

The study of Geometry acted as a precedent for practice in collecting books, and at the end of the term Mr. K. had scores of volumes from which he had deducted countless original proofs. The young men's future life of bachelorhood was amply provided for by Mrs. Rousseau in the Primary Methods class, for during the season of plying the needle the girls were sadly neglected. But we shall forgive our Preceptress for this one omission of duty, as she has shown her faithfulness very emphatically on other occasions.

Arithmetic Methods proved a very valuable and interesting subject to all members of the class. We became familiar with so many little devices for presenting different mathematical principles that when we begin teaching in the public schools we shall be able to complete the whole course in Arithmetic in a few years, thereby giving ample time to introduce Geometry, Trigonometry and Algebra into the last few years of the grammar school course.

The Literature Methods class provided an opportunity to bring forth the originality which is such a characteristic feature of the members of this June class. The criticisms of children's stories, which we wrote each day, contributed largely to this end. In several cases, many were unable to find books by older writers upon which to comment, so one of the young ladies supplied this scarcity by writing a very apt criticism on a book which was written by two of the Normal boys.

About this time we had completed the greater part of our work in the Normal proper, so we entered upon our duties on the other side of the Bridge. Here we received practice in applying the principles which we received in the different methods classes, and after five months' experience in teaching our Normal course was brought to an end.

The history of our class would be incomplete without mentioning something about the work of our members along other lines than that of the classroom. We have always taken an active interest in student body affairs and several of our members have held important offices in that organization. Many of our number have held positions on the Pennant staff and their efforts have contributed to the success of our school paper. Members of our football and baseball team have been chosen from our class, and we all have lent our aid financially and *in other ways* to the spirit of athletics in our school.

But the time for parting is at hand, and as we realize that we must bid adieu to those who have been our friends and classmates during the past four years, a feeling of sadness enters our hearts and almost overcomes the so-called joy which others may think should be our only emotion now that we have reached the end for which we have been striving. But though, from this time on, our paths will lead in different directions,

there will be two things that will tend to hold us together: a feeling of loyalty to our Alma Mater, and the fact that we were all members of the class of June, 1902.

HIGH SCHOOL SECTION.

(Daisy V. E. Bowen.)

Since all things must have a beginning, whether great or small, this class had its beginning.

As a great magnet attracts to itself all that is of the right "metal," so did the San Jose Normal draw from the many High Schools of this State the girls that formed the famous High School Class of 1900.

Oh, how our hearts beat and our knees shook when we first trod those front steps! We were ignorant then and dared venture where now we fear to tread. We pushed open the doors and stepped in. We felt as though we were surely launched on life's tempestuous sea. The simple fact was we did not know where to go, but we had learned to press on, so on we went, until the Y. W. C. A. sign caught our eyes. As a drowning man reaches out for the life buoy, we made for the "Information Bureau." Some went into the room opposite and found there a kindly looking man, but, oh, how fast he talked! By the designs on the board we judged he knew all concerning those pendulums and pulleys we had heard about in High School days.

After several mistakes and by receiving aid from the members of the Y. W. C. A. we managed to part with $5 and get the entrance slip. Our *first* slip. There have been others since.

It took several days before we had our programs signed and sealed. Those who were not fortunate enough to come from an accredited school will never forget those few days. Prof. Addicott was the first to make us feel the necessity of being "accredited." No matter what teacher we went to, that awful question was thrown at us. If some of us had silently passed to the other side we would have been disappointed had not St. Peter, before opening the pearly gates, said to us, "Are you on the two years' course?"

Faithfulness has been manifested by us throughout our entire course. Every day we went to music until we were informed by Mrs. Goodell to report but twice a week. Often did the High School class have the honor of leading the singing at the special request of the musical director.

One thing we did find hard to do and that was to shoulder our nets and go "bug hunting." Through these hunts we acquired the knowledge of all the back streets of San Jose and *some* found out what capital things nets were to pick pears with when the trees were more than an arm's length from the fence.

We took drawing the first year, two hours a day; one during school hours and one after. Our first outdoor exercise was enjoyed in connection with this, and I think we all would have taken advance drawing if we could have been sure of having frequent trips as pleasant as that one was. It was more to our taste to sketch than to hunt crickets by electric light.

Our chief delight was Nature Study. By the end of the course we could see islands, oceans, bays, lakes, rivers, deltas, valleys, brooks, etc., around every mud puddle, and could also enjoy naps during the hour if we did not mark the desks in our dreams, but the most remarkable accomplishment was the speed we acquired in getting up note-books. We feel very proud of these for they represent twenty weeks' work condensed to one hour's writing.

Thus we spent the first year, gaining knowledge and overcoming difficulties, with nothing to mar our happiness but the smallpox scare. Parties were formed and plans made to go over the foot hills and get out of the town as soon as it was known when San Jose went under quarantine. A committee was sent to the major's office to get an authentic report, but some of the girls had left for home before the committee returned. They gained a week's vacation while the rest of us did not.

After having a good rest during our long vacation we came back with "two notions to play and none to work."

We now began to study child life. Every young individual within walking distance of our boarding houses was observed and notes carefully taken concerning his Scientific, Self-Assertive, Emotional and Esthetic development. The children grew with great rapidity, one day their tendency to creep was reported in class, while the next report related how well they could reproduce some of the classics. It is the tendency of this race and generation to do things in a hurry.

From this delightful "Nature Study" we were plunged into the mysteries of Noah and his contemporaries. How educateion was carried on in those days! Great and keen were our "taking in" abilities, for never did we have questions to ask after a lecture by Prof. B., when he kindly asked, "Are all points clear? Anything to bring out?" We held our peace and silence reigned supreme.

About this time we decided to show the public that we could shine in social functions as well as in the

classroom, so we gave a Hallowe'en Party. There was only one boy in our class and he expended so much energy in gathering cattails that he was not able to assist us in even getting them into the hall. The invited guests were greatly pleased with our ghost drill, and tho't the girls looked so pretty (?) in their sheets and pollow-cases. The fortune teller was kept very busy by the Faculty, as all of them seemed to be waiting for an "unknown man" (or woman) and were anxious to know how long it would be before he would make himself known.

After this delightful evening of recreation was over we turned our attention once more to school work, and through the skilful instruction of Prof. A. we learned that if one million lines be placed upon each other, with perfect exactness, we would have nothing and see less. Last Xmas our parents were surprised at the dainty handkerchief boxes we brought home, and they marveled at the skill we had attained in manipulating the hammer and saw. Prof. A. told us if we took our work home "our mammas would think it was *fine*."

Now, after school economics and teaching, all is over. We have attended our classes for the last time, and it seems that these two years have passed too quickly. It is with a mingled feeling of joy and sorrow we leave our happy school days, the last some of us will ever enjoy. We are glad to reach the goal for which we have been striving these past years, but sorry to separate from our friends and teachers.

Our paths all lead in different directions and we may never see each other again, but never shall the days spent in San Jose be forgotten and they will help us bear the burdens that will rest upon our shoulders the more cheerfully, and the memory of the Normal will urge us to strive with a fresh zeal to do our best for the sake of our Alma Mater.

Class Prophecy.

A Sibylline Trip to Copernicus.

"Attention ! ! ! All those who wish to take a trip to the moon meet in front of the Normal at 10:15 P. M. Wednesday, June 25, 1952. Bring lots of wraps and plenty of lunch. Traveling good. Scenery beautiful.

The above telegram was just received, so donning my outing costume I proceeded to the State Normal School, there to find a large party crowded around some one who seemed to be giving instructions of some kind. I elbow my way toward the middle of the group and hear a tall, dark-haired man talking very rapidly. Listening attentively I hear him tell the people to notice the rapid rise of the thermometer, —at first a stifling heat caused by the friction of the car on the atmospheric strata, later the intense cold, —and he cautions his hearers to keep their wits about them, and in so doing help to keep their equilibrium, "For," he says, "if you lose it, and get on your heads, it will be almost impossible for you to get back on your feet. Understand me," he continues, "it will not be a bit less comfortable on your heads, but being of the earth I presume you want to be earthy. If everybody is ready now we will proceed to the station," he finishes.

While he has been talking the memory of other days is upon me, but not until some one presents Prof. Clarence Wilson, do I know why. He tells me he has been for the past forty years teacher of Physical Geography in the Normal, and that this is his annual trip to the moon. "You know we go there now instead of looking at it through the telescope on Mt. Hamilton," he adds.

Ting-a-ling—ting-a-ling—and the trolley comes to a standstill within four feet of me. "To the Moon by way of Milpitas," calls out the conductor. In five minutes, he sings out in a deep bass voice, "All aboard for the Moon," and we shoot off into space. I look around in a bewildered way. I've heard that voice before—but where? As he comes to collect the nickel fare I look up into the face of Alex Cuthbertson. He is little less surprised than I. I ask the whereabouts of Adah Williams, for I had heard years ago that she had organized an opera company with Alex as her manager, but he tells me she became tired of play-

ing for the public. He is still her business manager. She looks after the home while he does the same for the business.

"Will you have a sandwich?" a young woman asks at my elbow, and I turn to see—Christine Jessen. She tells me she is assistant teacher of Physical Geography in the State Normal School; that she accompanies Prof. Wilson's classes on their excursions, and that her duty on these trips is to see that everybody has enough to eat. Before leaving me she gives me a pair of glasses, and says if I look at once I will be likely to see Milpitas. Taking her advice, I adjust the glasses and see a large, handsome building, over the main entrance of which is the sign, "The Milpitas Conservatory, conducted by the Misses Menithan and Cooney." In what seems to be the fashionable part of Milpitas, the Nelson Addition, I see another sign, and this one reads, "Mlle. E. Wilbur, professor of dancing. Hours 1 A. M. to midnight, Sundays excepted." 'Tis strange, for in the olden days Eva Wilbur was one of the girls who was not fond of dancing.

At the upper end of the car a man and woman stand talking. Their conversation soon reveals their identity.

"Then we are already beyond the limits of the terrestrial atmosphere, Avis?"

"Undoubtedly, Winnie. It is not 10:55 yet; we have been gone about eight minutes; and if our starting speed had not been checked by friction, six seconds would have been enough for us to pass through the forty miles of atmosphere which surrounds your globe."

"In what proportion do you estimate the diminution of speed by friction?" asked the first speaker. "In the proportion of one third. That seems immense, but it is so. If, for example, we had an initiatory speed of 12,000 yards on leaving the atmosphere, this speed would be reduced to 9165 yards."

Avis King, propritor of the "Trolley to the Moon," is trying to induce his friend Winnie Lee to accept the position of motorwoman on his car. Avis having come to the conclusion that it is much the wiser plan to have a woman run the trolley.

"Tycho Brake," the conductor calls, and the passengers prepare to alight. It is understood that the return trip will be made at midnight.

The station is a grand glass affair, beautifully equipped. In the ticket office sits Jessie Armstrong, serene as ever. Through the crowd at the station a tall slender woman makes her way to my side. "This is the annual excursion from the San Jose Normal, is it not? May I ask how many in the party, and who is acting chaperon?" she asks. "I am the Society Editor of the 'Moon Daily.' My name is Widemann," she adds. Recovering from my surprise, I introduced myself. She is delighted, and tells me some news—that Robert Reid is Business Manager of the "Moon Daily"—that he makes a specialty of having fine cuts in his paper at no matter what trouble and expense, and she says, further, that on the staff of the same paper appear the names of Lizzie McKiernan, who looks after the Literary Department, while Lillian Biggs has charge of the News.

One of the first things to attract my attention on leaving the station is the great number of people on the road. I follow them and find they are going to one building. On arriving, I see in large, gilt letters, "Marriage Bureau. Marriages arranged and performed while you wait. Women imported from the Earth a specialty. Proprietor Mrs. Harriet Wilson." On entering there stood Mrs. Wilson, *Grave* as ever. She tells me she can make her living no way but by making matches, and the Moon she finds a very good field for her work. When she asks if she can make arrangements for me, I beat a hasty retreat.

On the street again, and at the curbing stands a row of moonobiles, into one of which I very quickly get, and tell the woman on the driver's seat to go "anywhere." She looks at me in astonishment, and exclaims, "Is it possible?" "Well, you ought to know; you seem to be the driver of this concern," I answer, petulantly. "Oh, I did not mean it that way. I was just surprised at seeing you. If you want to go 'anywhere,' of course I'll take you," she replied. When I had cooled down enough to listen to her she told me her name—Mary Driscoll—her business—driving tourists to the interesting points of the Moon. She asked if I would like to see some of the girls of the June class of 1902. My answer you can imagine.

We stopped in front of a large brick house and went in. Over the door this inscription attracts the passer by: "Employment Office." I wonder that even in the Moon they have such things! In the inner hall is the notice—"Wanted—Teachers under the age of 75 years; town and country. Wages $100 to $150 per week. No men need apply." The woman in the office seems to have seen better days. She is one whom we knew as Kate Welch. Her right-hand women are 'Ora Trott and Henrietta Wolford.

Next my friend proceeds to the studio of the Moon's famous artist. We find her in the depths of

paints and brushes. She works from life she tells me. A great part of her time she is busily engaged in painting the Man in the Moon. Her name? It is still Georgia Johnson.

The driver now turns to the Moon's most noted spot, the Observatory on Copernicus, which possesses one of the wonders of the age, a self-adjusting, talking telescope. In this enlightened age in the Moon one does not have to spend one's time and energy in trying to adjust the telescope to one's sight. It does all that of itself, and when the place wanted is at hand this wonderful instrument calls it out. The inventor of the machine was Fanny Humaston. The quiet people make their mark in some world.

Reaching the summit, I find there a well-established town surrounding the Observatory. The professors in charge are the Misses Pfau, Main and Patchett.

This Observatory boasts a hotel adjoining. This for the accommodation of tourists, and for their further accommodation the rooms in the hotel have connections with the great telescope. By way of amusement for the guests phonographs and telephones of wonderful invention are provided. The proprietor is Carolyn Gregory. Her clerks are Lurena Merriman and Julia Hinkson. The bellgirl is Ethel Wood.

After being shown around the Observatry, I go to my rest. Ting-a-ling—I count five bells, and then I lay down my interesting book, entitled "The New Fall Styles of 1952," issued by our dear little President of the June Class of '02, and answer the 'phone. Imagine my surprise when I find that I am talking to our soft-voiced and ever-pleasant little friend and helper, Mamie Baker. She says she is ever so much taller than she was when I saw her. She has been matron in a large school for children, but has given it up to become the wife of Captain —— of the vessel Ohio.

Returning to my chair I draw the phonograph toward me and glancing over the plates my eye falls upon, "A Lecture," by our great politician, Gertrude Christman. Gertrude gives the evil results of not voting, and says she can see no sensible reason why anyone should forego that pleasure. I wonder if she has forgotten the election of officers for the June Class of 1902.

Just received a telegram from one of our sweet and much-beloved friends, which reads: "Will be with you soon. Have been engaged as History teacher at Stanford University, California. Vacation begins the 27th. Signed, Olive Beckington."

Have just finished a very interesting book. It was written by Elizabeth Marcus, our "busy girl." It is entitled, "How to Kill Time While Teaching School Economics," and is especially valuable to inexperienced teachers.

As the air is perfectly clear, and there are no fog banks rising to obstruct the views, the telescope calls out "London." My attention is soon called to a large sign printed in gold letters, "One of the Seven Wonders of the World." I take the number of the theater and immediately 'phone to see what the wonder is. I find that our friend Aimee Meachen is traveling with a troupe, because of her beautiful hair, which was always so much admired at the Normal. The sign which had so completely won my heart because of its artistic value was, I learned, painted by Elsie Wiley, who is traveling with the troupe as Aimee's friend and companion.

My curiosity satisfied, I again resume my position at the window, but am once more disturbed by the carrier pigeon, who leaves several letters and a package. Glancing at the postmarks from Paris, Earth, I open it first. It is from one who was Leona Bayley. She is now Mrs. ——, and she writes that after several years of unparalleled gayety she and her husband are traveling through the Orient, after which they will return to their home at West Point, on the Earth. The other letters are of no importance, but the package proves to be a "miniature dresser" of very unique design and beautiful carvings. It was planned and made by the Manual Training boys of the "Hough School," in Italy, under the direction of Prof. Clarence Hough.

The telescope calling "Russia," I hasten to see the attraction. I discern a crowd gathered around a large rostrum. Gazing more intently, I make out a sign which reads. "Nature Study a Specialty," and almost at the same instant do I recognize Julia Ethel Dalton seated in a large chair eagerly tearing to pieces some beautiful flowers in her desire to teach the different parts to the many children gathered round.

Sorting my plates for something interesting for the phonograph my eye falls upon one entitled, "Description of a War Vessel." The instrument pours forth a genuine lecture on the various parts and capacities of a ship. Think of your Literature Methods Class and you will remember Lovett Fraser as the author of this clever and instructive lecture.

Just received a cablegram from one of our girls whom we knew as Nettie Hitchings. She and Rose Kelleher are to give a grand art exhibition in Rome on the 29th. The pictures to be shown are painted by

the two ladies alone, and the world says they are more famed than the works of Raphael and Corregio.

"Daisy Bowen has won world-wide fame as an authoress. She has been assisted in all her work by her faithful friend Florence Porter," is the announcement I see upon my table.

The telescope again. Wondering what it will bring forth, I look and see a dark object in the shade of an oak tree many thousands of miles away. It proves to be none other than Gertrude Meads busily engaged in novel reading. Of course all the novels she reads are "Standard."

Turning my telescope, it stops at a large sign which reads, "Headquarters for Y. W. C. A." Upon inquiry I learn that Helen Protzman and Clara Foy are the managers of the place. Even in the days of 1902 they were always faithful workers in Y. W.

Hit or miss, I pick up a plate for my phonograph. It is the speech which made Hope Pyburn famous over all the worlds. She is now one of the greatest lawyers of this age. At the end of the above speech is an advertisement of a Lecture by Elora Yancy: Subject, "The Benefits of Normal Schools from the Standpoint of a Graduate." The louder and faster she talks the more she charges. Judging from past experiences she must be very wealthy by this time.

Glancing over the mail I find several papers, one of which attracts my attention. It is a sort of leaflet entitled "Government of Young Girls Who Leave Their Parents to Attend the Normal." The facts are plain, the suggestions good. The name of the editor-in-chief is none other than Clara Pierce. She probably has seen enough to cause her to write this pamphlet, who knows? In the same assortment is an announcement from Cornell University. In the faculty list I see the name of Walter Frost, Prof. of Mathematics. No doubt he is a renowned mathematician, as he had all the qualities of one even to the long bushy hair.

Gazing through the telescope I discern a "swell" millinery establishment. Flop hats, trimmed in pink flowers, seem to be having quite a run, as that is all I can see in the window. The name over the door is "Madame Henrietta Smith."

An Indian reservation with Nellie Rinehart and Linney Rhyne looking after the children is what I see next.

London, and above the door of a large business house the name "Osgood & Co., editors of the London Times,' attracts my attention. No doubt the jolly girl, Hattibel, after her marked success with the "Normal Pennant," followed that line of business. In one of her papers of recent date I see in large letters on the very front page, "Wonderful Chemical Discovery," and as it is especially marked I am eager to read it. Mamie Brown and Edith Daniels, although isolated on an island, are now enjoying fame equal to that of Marconi. Both girls, being of a scientific turn of mind, are doing something for the people of Western Australia in the way of obtaining water. They, with a wonderful concoction of chemical bombs exploding, caused rain to fall. A reservoir was made of an empty balloon bag cemented at the bottom and sides, and all the rain was held to be used when needed. The experiment met with perfect success, and the news spread like wild fire. Delia Pare and Amy Hodges went at once as missionaries and are working wonders. In the same paper is the notice of missionary work done by Clara Donlon Carter. Of course we all knew it was a sure case even in the early days of '02.

The head lines, "Speech by Mrs. Myrtle Hall," next attracts my attention. I understand this is the speech that made Edna Klumpp President of the U. S. Myrtle is now Pres. Klumpp's private secretary.

"Venice," and I behold an immense throng wending its way to a building. What can the attraction be? Posted all over the city are bills, "Lella Cameron appearing as leading lady in 'Antigone.'" She has captivated all by her rare ability as an actress.

I am sitting by my window and my telescope calls "Niles." Whom do I know there? Why, it is Mabel Dassell. She was married to Mr. —— a very short time after her graduation from the Normal.

The second arrival of the mail in one and one-half hours! They do things up quickly in the Moon. This time a package and two letters from girls of the Class of 1902. Vida Green tells me of her success as a tailoress. Her establishment is the mecca of all the devotees of fashion.

In the other letter I see that Annie Collins begins to look old. One day surrounded by some little nephews and nieces this question she was asked: "Did you ever have a sweetheart, Auntie?" Now, of course, Annie had, and she told them some of her love affairs. She concluded by saying "Once I did Lovett, but that time has passed."

The other letter is from our sweet and unassuming friend, Pearl Bohnett. She sends me "A Short Course in Cooking," for the S. N. S. Every receipt has been tried by her in her private Cooking School, where she spends most of the time.

This latter piece of news has made me hungry, so

I ring for some tea—an old maid's comfort. The girl who brings it seems very talkative. Her name is Elma Fisher. When she learns mine she is delighted. She has just heard from Maud Talbott and Edna Raum. These two ladies are about to open a sechool in Mexico. They have become tired of the wild condition of that country and propose bettering it if "Rules and Regulations" will do anything. Mrs. Laura Bailey is running a Kindergarten about 500 miles from where they intend to locate, so they will not be lonely. She says that Emma Loofbourrow became tired of the profession of music and went to astronomy. Since May 16, 1902, that subject has had a wonderful charm for her. Somehow the name of Cordelia Hays is linked with that of Emma, and I ask about her. I learn that Cordelia gave up teaching when she lost her faithful assistant of Normal days, and is at present engaged as editor of the Scientific Department on one of the leading dailies of Paris.

In the Etude which I find upon my desk my eye falls upon the name Lillie Muscio. Is it possible she has become famous in so short a time as a composer of music? In the same paper—it seems to deal with members of the June Class of '02 exclusively—is the item "Edith Bailey is now located in Paris. She furnishes original mottoes to schools far and wide."

The S. N. "Pennant" I next take up, and in the news column see several things that interest me. Lizzie Dienst is giving a series of lectures on "Dewey's Works," is one of the first. Then Agnes Hoey, Zippa Holland, Mamie Sullivan, Bertha Reid and Nell Flanders have just returned from their annual outing of the Browning Club. This time it was to Mars, by balloon. I try to remember these names and do so after a short time . Yes, they too belonged to that world-famed Class of '02. The article goes on to say, "The chaperone of the party is our dear, jolly Nell. She has made chaperoning her profession. Mamie is manager of a Ladies' Brass Band, Agnes is a trained nurse, Zippa has just had published a book on "The Inductive Method of Teaching Concrete Geometry," and Bertha is Preceptress in Georgetown Seminary. By her gentle and confidential manner she has won the affection of all. Not one of this party looks a day older than she did fifty years ago."

"Take one last look through the telescope. It is almost time to return to your car," says the maid. I do as I am bid and see in a far distant town a great circle of little children standing upon a platform in the center of which is a lady bearing a remarkable resemblance to Adeline Hedley. It is she. The rehearsal of the dancing class is about to begin. Yes, Adeline always loved to "trip the light fantastic." Not far from this place on the door of a handsome house is the sign, "Clara Glashoff, Designer." I am not very much surprised, for I always knew Clara had great taste.

My moment of grace is up, and I proceed to return to the Earth.

Olive Beckington
Nell Flanders.
Mary Sullivan.

A Farewell From The Faculty.

Good bye! We are sorry to lose you,
But in order to keep you, 'tis clear
We'd have to put P's on your records,
Which would not make you happy we fear.

As the sense of our loss steals o'er us,
With conflicting emotions we're torn;
One moment we smile at the prospect,
In the next with long faces we mourn.

We think of your sweet dispositions,
Of your graces and bright winning wiles;
But recall that when giving standings,
We were sometimes deprived of your smiles.

We have seen you look wise and studious,
Quite oblivious of mischief or play;
But we know very well what happened
When our eyes turned a moment away.

To teaching you often responded
With long columns of capital C's;
But honesty leads us to mention
There were also "conditions" and P's.

As guests at society functions,
We admired your light grace while you danced;
But judge it's confusing to brain cells,
For at clock or at watch you ne'er glanced.

You often have made sweetest music,
In your singing have rivaled the lark;
Yet we know that your serenading
Made the dogs in the neighborhood bark.

We'll not put in full upon paper
All the things of both kinds that we know,
For of some you might be vainglorious,
And the rest would astonish you so.

But then, if you had been quite perfect,
We'd have been very lonesome may-be;
'Twould call for a *Faculty* perfect,
And, in that case, O where would *we* be?

So with tears and smiles intermingled,
We assure you we'll all miss you *some*;
Yet we have this sweet consolation—
There are plenty more like you to come.—R. R.

CLASS OFFICERS

Bessie Williams, *President.*

Clara Glashoff, *Vice-Pres.*

Cordelia Hayes, *Secretary.*

Mamie Baker, *Treasurer.*

Farewell From the Juniors.

We will miss you, haughty Seniors
When you from our midst depart,
Would that we could only tell you,
What a pang 'twill cause each heart!
Much will we our loss deplore;
How you only pass us by,
With a calm and cutting eye,
But we'll meet you bye and bye,
When our school days all are o'er.
We will wait here for our turn
Now we only live and learn.

O, the cold Superior smile,
O, the patronizing air,
And the freezing, stony stare,
And the sneers we have to bear,
Patiently, and all the while,
We endure it, for we know,
That we'll miss you when you go!

Ah! we know that you'll return;
From the rostrum take a view
At the ones that once you knew,
Before you made the grand debut!
And we know your hearts will yearn
For the days you've left behind:
Better days you'll never find.
So we wish you well, dear Seniors
Our hearts with naught but friendship swell
This and more we wish to tell you,
In the sadness of farewell.

M. C. B. '03.

Last Will and Testament of the June Class, 1902.

We, the Senior Class of the State Normal School of the City of San Jose, State of California, at the age of four years, and being of sound memory, and not acting under duress, menace, fraud nor undue influence of any person whatever, do make, publish and declare this our last will and testament in the manner following:

First, Be it willed that the incoming Seniors have the controlling power. You are Seniors now and we give you the dignity that we have so successfully sustained this year. You will be looked up to by underclassmen as wonderful; in other words, you are "stepping stones to heaven."

To the others of you we leave the "slips," that are issued semi-monthly. We are sorry that we cannot get hold of all the teachers' slip-books and cast them into the "fiery furnace," but since we are only mortals—hoping for immortality of fame—we leave these to your tender mercies. Treat them kindly; bathe them with your briny tears; fold them carefully and lay them on your study table so that every time you enter your room you will experience that heart-rending sensation that accompanies these little tokens of remembrance.

We give you the "Bridge of Sighs." Ah, me! It gives us extreme satisfaction to place this in your care and keeping. We know you will ever keep its memory green. Do not let it sap your life-blood away, but put on a brave face, enter the Training Department with a determination to succeed, and as one eminent teacher here keeps impressing on our minds, "maintain discipline," at whatever hazards. "Love those who hate you; do good to those who despitefully use you." You have no better friends in this school than the "young ideas" whom you have endeavored to teach, and never a truer friend can you find than your critic.

To all, the Seniors included, we will the abominable tests. These will be a great benefit to you in after life, we are told. They give you world-wide experience, especially if they are in geography, and arm in arm with other tests, you may have C',s c',s and P's. The last we hope you will have little use for except in the alphabet. Shun that P as you would a poisonous serpent.

The many pleasures we are so loath to leave, Y. W. C. A., Browning Club, Art Club, the Y. M. N. D., with its deep subjects for discussion, and the different societies—all these we leave to you. Cherish them as the "apple of your eye."

Last, but not least: Girls, to you and you only, do we leave the boys. Take good care of them; they are precious. You know "precious articles are done up in small packages," and truly, girls, we have but few boys here. We shall take a goodly number with us, as we launch out on the sea of teaching; we hope they will be most efficient in their labors (of love)—bring those left in your care to the highest goal, but *never* admit that a boy is smarter than a girl.

In witness whereof, we have hereunto set our hand and seal this twenty-fifth day of June, in the year of our Lord, nineteen hundred and two.

SENIOR CLASS.

The foregoing instrument, consisting of three pages, besides this, was at the date hereof, by the said Senior Class, signed and sealed and published as and declared to be its last will and testament in the presence of us, who at its request and its presence and in the presence of each other, have subscribed our names as witnesses thereto.

LIZZIE MAY DIENST.
A. SSEMBLY HALL.
BRIDGET SIGHS.

The Mt. Hamilton Trip.

Every class throughout its long course in the Normal has a number of days, distinct and separate from others, which may be styled "red letter days." To these are attributed many pleasures and good times, among which is the always-looked-forward-to Mt. Hamilton Trip. The last one of May 16th was in no way an exception to the rule, unless it might be that it excelled in everything the trips of all other classes.

Despite the fact that the weather was very unsettled for several days previous, and that it was found necessary to consult the Weather Bureau Reports every day to see the range of the barometer, yet all were perfectly satisfied with the report given that Friday would be clear, sunny weather. Extensive preparations on all sides were accordingly made.

The making up of the parties was one of the very interesting preliminaries to all those concerned. Prof. Holway, especially, found it so very much so that he decided to raise the fare to three dollars for any one wishing to make a change. The changes were few after that, and dividing the crowd of over, one hundred was soon settled.

Everything having been arranged, the morning of the 16th saw the carryalls loaded with merry, laughing students, and endless numbers of lunch baskets, blankets and robes of all descriptions, and a dutiful chaperone bent upon the welfare of the party, and anticipating a general good time for all.

Only one of the rigs was patriotic enough to have its Normal colors artistically draped on all sides, but when we consider that this rig was particularly favored in possessing the whole number of young men, it is only natural that it was so. This same crowd, however, found it difficult to retain its reputation for patriotism, for before the ride was over there were others who shared its colors and also its horns.

The long morning ride was very pleasant and exhilarating, especially for those seated beside the driver, who got the full benefit not only of an unobstructed view in every direction, but also of the cool mountain air, which was so very refreshing and invigorating that before we had gone many miles each party was pouring forth strains of all the old songs they ever knew, including "Aunt Dinah's Quilting Party."

Some were faithful to their Physical Geography, and observed the stratified rocks along the banks of the road. Others, more interested in Botany, climbed in and out of the rigs and ran to pick a bunch of wild flowers here and there, and at the same time indulged in their Physical Culture exercises.

One of our "chaperones" produced a very charming effect, with his hat literally covered with wild flowers, arranged a la mode—"the hanging down effect." Another party was so ingenious in making himself a pointed paper hat and arranging his glasses in such a manner that he was styled "Father ——" by the others. He certainly proved very deserving of his title, for before we reached our destination he was kind enough to pay his regular visit to many of the parties to see if he could be of any assistance.

We reached Smith's Creek none too soon, for by this time all were ready to "solve the mystery" of the lunch basket. After refreshing ourselves for over two hours, and making a change of horses, we made our final start for the big mountain which towered above us at a distance of about seven miles.

About five o'clock we reached the top of the mountain, and at once repaired to the office where we could register and make our final arrangements to take in the Observatory. The members of the staff were very kind and obliging to us in every possible way, showing us everything to be seen, and fully explaining the different instruments, pictures, etc.

By this time we were ready for something to eat again. We were given the use of a shed in which were arranged a number of large tables and a red-hot stove, upon which we made our coffee. Though the accommodation was small for such a crowd, yet we managed to satisfy ourselves for the rest of the evening.

As there was still some time before we could look through the telescopes, we all took a position where we could get a good view of the valley before us, and of the setting sun. This beautiful view, however, was obstructed by a heavy fog, which blew over the mountain in such volume that for a time we all were afraid we should be disappointed in our look through the telescope. The fog blew over rapidly, and within an hour, to the great satisfaction of all. The sky was beautiful and clear and the moon shone brightly in the heavens.

While waiting for the hour to come when we should be admitted to the observatory, a number of our crowd participated in racing, jumping, etc., to keep from being carried away by the terrible gale blowing on the mountain.

Soon everything was in readiness for our final observations, and each of us, after patiently waiting for some time, was rewarded with a look through the

"thirty-six-inch" at Cupernicus, a crater on the moon, and with a look at two stars, millions of miles apart, but appearing almost blended together through the "twelve-inch."

By nine o'clock nearly all the parties had snugly packed themselves away for the long cold ride home. With a bright moon overhead, and nothing to prevent a steady, fast ride, we reached San Jose at about one o'clock Saturday morning—all tired and sleepy, but well repaid for our long journey. , E. L.

The Election.

The June Class was going to have an election. That was apparent from the amount of electioneering that was going on during the five-minute periods. Those on the June list for graduation had been sounded days and days ahead. Then the eventful day came. After much dallying, through the factions' hearing that one from the other side might get the chair, even *pro tem pore,* someone settled matters by forcing dear, good Professor Bland in to call the meeting to order. True to his nature, he made sure that all were satisfied before allowing the elected chairman to preside.

Well, Bob took the chair and conducted the meeting in such a manner that more than one Co-Ed rose in love to meet the just demand. He stuck to his rules in spite of all the preparations of some of the other boys who tried to over-rule with the help of their little volumes of "Robert's Rules of Order," which from time to time they pulled from their pockets. The girls were prepared, too, but true to their sex they carried such things in their heads.

And there was Cuffy—always ready for a debate when someone else wanted the floor.

The nominations were on. Everything was going as lubricated, until, in her anxiety to get her man in quickly enough, one of the girls nominated Mr. Cuthbertson for an office not billed. Then these babies in politics did not know exactly what to do—and to help matters along Miss Flanders, of the opposite faction, pleaded in her overwhelming kindness that the other side *forgot,* and that they ought to have another show. Things were adjusted by Mr. Cuthbertson's resignation being accepted. Then came the counting of the votes. Mr. King, with a characteristic shake of the head, insisted that everything be square.

When it was all over, and the defeated had congratulated the victors, the two parties merged into one.

C. G.

The Bridge of Sighs.

(With Apologies to Hood.)

One more unfortunate,
All out of breath
Just from the Training school—
Region of death.

Bear with her patiently,
Mark her with care,
Face drawn up acidly,
Cross as a bear.

Pass her not scornfully,
Think of her mournfully,
Tenderly, humanly;
Not of the cheek of her,
What there is left of her,
Still—must be womanly.

Which was her pesky class?
There—see her critic pass!
Had she a sassy lad?
Had she a giddy lass?
Or was there a meaner one
Still, and a harder one
Yet—the spoilt pet?

Alas for the rarity
Of critic's charity
Over fhe bridge!
Oh! it is pitiful!
With a whole city full,
Help she has none.

Where the plants grow,
By the back steps you know,
With many a quiver,
And change of the liver,
She crossed with a shiver
One morning and lo!

As in she walked boldly,
There stared at her coldly,
Her critic's broad ban,
Picture it—think of it,
Awful predicament—
Smile at it, joke at it,
Then, if you can,

Bear with her patiently,
Mark her with care,
Face drawn acidly,
Cross as a bear.

Bestow help when ever you can
Be it for maid or man;
Conceding what state
Is the gift of cruel fate,
Do all thats in your power
To cheer each dreary hour.

CLARA DONLON.

HENRY MEADE BLAND
President Normal Club

The Normal Pennant.

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Another June, another graduating class, and in natural sequence, another souvenir edition. To the Faculty it is only another graduation, to the undergraduates it is merely a season of reckless cutting and ceaseless gaiety, but to us it is the culmination of an eventful epoch in our lives.

Hitherto graduations have passed as pleasant ripples of excitement barely disturbing our customary calm, but now there has crept upon us almost unawares a tidal wave of restless emotions, jostling moments,—*our* graduation. And with it that hard worked word, Good-bye.

Is there in our language a word which is made to perform such miscellaneous duties? The school-girl flings it lightly back as she leaves her chum at the corner, the lovers murmur it coldly as they part in anger, the mother breathes it as a prayer for her manly soldier-son,—for a minute or for a lifetime, in joy or in sorrow we have but one word—good-bye. To us it contains a world of emotions, but we banish the tear that would rise to our eyes, for our graduation pleasures must not be marred.

L'Allegro or Il Penseroso? L'Allegro forever! To the Normal School, to the Training School, to "tests," slips and P's, to the Faculty and students—Good bye.

In preparing this issue the editors have been greatly aided by different members of the Faculty, who freely contributed not only advice—always easily obtained—but articles and time. For the artistic features of the paper we are indebted to students of Miss Vivien's classes, from the High School as well as the Normal. To all these we are sincerely grateful.

The June Class, '02 is to be congratulated on having the good fortune to secure Prof. Josiah Royce of Harvard for the delivery of the Commencement Address. The fact of his being the brother of our popular librarian Miss Ruth Royce, lends added heartiness to the reception his personal ability would command.

The class rush is an innovation of which the June class '02 is justly proud. It may be that it will rank with Ivy Day as a custom established by the Naughty-Twos. Such is the result of "having originality drummed into us ever since we have been in the school," and though as yet there has been manifestation of little besides original sin, the mellowing influence of time may surround our names with a halo.

WHEREAS, it has pleased Almighty God to call from among us our beloved friend, Leonard Nelson, we, the Student Body and Faculty of the San Jose Normal School do hereby tender our heartfelt sympathy to those who were nearest and dearest to him.

THEREFORE BE IT RESOLVED: That in the death of one who so recently completed his work in this school and had begun his work with the great army of teachers, in our state, we have lost a friend who had won a warm place in the hearts of all who knew him; that since our Heavenly Father has deemed it best to call our friend to Himself, we mourn with the bereaved family in their great loss.

BE IT FURTHER RESOLVED: That this heartfelt testimonial of sympathy and sorrow of the Student Body and Faculty of the San Jose Normal School be sent to the bereaved family, and that a copy of these resolutions be published in the daily papers of San Jose, and in the "Normal Pennant."

STUDENT BODY and FACULTY,
San Jose Normal.

STAFF OFFICERS OF PENNANT.

Aimee Meachem
Annie Collins
Edith Bailey

Hattibel Osgood

Robert Reid

Henrietta Wolford
Clarence Wilson
Grace Wideman

Societies and Clubs.

SIGMA THETA CHI.

Sigma Theta Chi, which for nearly four years has been an important factor in the social life of the Normal, is constantly gaining in membership and strength. The position which the sorority occupies in the estimation of its friends and patrons testifies to its increasing popularity.

During the past semester the girls have been charmingly entertained by several of the members. Many happy times spent at luncheons, banquets, "afternoons," and "evenings" are remembered with pleasure by the participants in those festivities.

The members of the alumni are always welcomed most heartily by their "frat" sisters, who endeavor to make the return to their Alma Mater an enjoyable event.

On the evening of the seventeenth of June the friends of the sorority were delightfully entertained at the beautiful home of Mrs. O'Brien, 910 South Second street. Dancing, to the strains of Brohaska's ever-pleasing music, was the feature of the occasion. During the evening frappe and ices were served. The spacious rooms were tastefully decorated, and the numerous cosy corners were enjoyed. The moonlit lawn made the most pleasant promenade imaginable. Many were the congratulations received by the hostess upon the success of the evening.

The active members of Alpha of Sigma Theta Chi are: Bonnie Gaine, Ethel Carr, Maude Hunt, Lillian Raney, Grace Widemann, Hattibel Osgood, Janet Bell, Bertha Russell, Ethelwyn Caldwell, Myrtle Hodge and Emma Resseguie.

Alumni: Clare Boyce, Theresa Burtscher, Olive Stephens, Laura Bailey, Maude Mariner, Hazeltine Hayden, Bessie McBride, Laura Hathaway, Elsie Ruhl, June Chappell, Agnes Mason, Ethel Blythe, Beatrice Johnson, Olive Beede, Clifton Swisher, Bertha Cornforth, May Hayward, Mary Cortner, Lulu Spangler, Genevieve McBride.

SAPPHO CLUB.

Through all the long weeks from September until June, Sappho girls have played and sung and chattered, and if the intellectual element of the Club has not reached an imposing height, the social life has been the means of so endearing us to one another that we dread the graduation which will take so many of our members away. We send with them our love and best wishes and hope that often in their after life they will recall our jolly club meetings and will on some Friday afternoons find their way back to the old S. N. S. corridors. We ended our year with a good time on June 14th, given in honor of our graduates, Lella Cameron, Hattibel Osgood, Pearl Bohnett, Ethel Main, Clara Donlon, Annie Collins, Vida Green, Bessie Williams, Eva Wilbur, Edith Bailey.

The Allenian girls were our guests and we feel sure that everyone enjoyed the farce, program and informal dance.

ALLENIAN SOCIETY.

The Allenian Society has grown very much during the past year. Not only has it grown in interest, but also in members. There have been fourteen members initiated during the past year. All of the members have taken a great interest in the meetings and helped to make the meetings enjoyable.

The society has had a number of social gatherings during the past forty weeks.

The first was held at the room of Miss Lorena Daily. The proposed members for initiation were present and enjoyed a candy pull. On October the 11th the first initiation was held at the home of Bonnie Gaine. On this occasion nine members were initiated, Misses Ethel Gray, Christine Jessen, Pearl McCloskey, Floy Joiner, Edna Kennedy, Edna Finley, Gertrude Williams, Lillian Cahalan and Maude Baker. After the initiation a social time was spent, after which refreshments were served.

The second initiation was held in the Normal building, Misses Ethel Carr, Edna Klumpp and Gay Fernald being the candidates. After the initiation a tamale supper was enjoyed in the society room.

The initiation of Miss Lulu Brown and Miss Clara Powell was held at the home of Miss Gertrude Williams on March 21st. After the initiation a banquet was enjoyed by all.

There were two graduates in February and one in April. The February graduates were Miss Edna Frost and Miss Blanche Bunney, and Miss Alice Baker

SAPPHO CLUB

in April. A reception was held in honor of the first two and a banquet in honor of Miss Baker.

There are eight graduates in June, Misses Leona Bailey, Edith Daniels, Mary Baker, Emma Patchett, Emma Loofbourrow, Edna Klumpp and Cordelia Hayes. A reception and farce was given in honor of these graduates on Friday, June 13th.

Allenian has at present an enrollment of thirty-four members and has had a most prosperous and enjoyable year. The members will long remember the good times of the year 1901-1902.

YOUNG MEN'S NORMAL DEBATING SOCIETY.

In accordance with the general prosperity of the school the Y. M. N. D. Society has experienced a very successful year. This has been evidenced by the strong administrations we have had and above all by the great interest manifested by the majority of the members at the regular meetings. We have appreciated the honor of belonging to the oldest society in school, and one of the oldest on the coast. We have contributed our best to maintaining its proud record, and as the year comes to a close we feel that our efforts have not failed.

Among the June graduates of the school we lose five of our strongest members, but in partial atonement for this loss during the past few weeks four new members have joined the ranks. Granting that among the class that enters in September the Y. M. N. D. will receive its share of reinforcements, we find ourselves confidently anticipating a very prosperous term next season. To those of the June graduates who go forth with Y. M. N. D. diplomas neatly tucked under their arms we wish the best of success, and we feel that among the accumulation of experiences with which which they leave, those acquired under the pale of the Y. M. N. D. will prove to be of decided worth.

ART CLUB.

The Students' Art Club, organized nearly two years ago for the purpose of encouraging the study of art and of giving a more general knowledge of the great masters, has made rapid progress under the careful guidance and supervision of its leader, Miss Vivian.

This year a course of study was completed on the lines and work of the most noted modern artists of the English, French, German and Dutch schools, and also our own modern painters and sculptors.

The Club has not confined itself to study in the club room, but a few weeks ago its members took a most delightful trip to Stanford, visiting the museum and chapel. The principal feature of the trip was the Greek play, "Antigone," which none of the party failed to appreciate and enjoy. On the evening of June 16th the graduate members of the club were tendered a most delightful farewell reception in the corridors, which was greatly enjoyed by all.

The officers of the term are: President, Agnes Hoey; Vice-President, Caspar Ornbaun; Secretary, Ethel Main; Treasurer, Miss Vivian.

Y. W. C. A.

A glance at the work of the Young Women's Christian Association for the past year must bring to the minds of those interested in it the memory of many pleasant and, more particularly, of many profitable hours. The Association has grown during the year both in members and in amount of interest. The devotional services have been helpful. Among the guests and speakers have been Miss Stafford, the Coast Secretary of the Association; Dr. Maude Allen of India, Dr. Kummer and Rev. Mr. Young.

One of the most pleasant things to remember is the conference at Capitola, which twenty-one members of our Association attended. This conference is held annually and is under the auspices of the American Committee of the Young Women's Christian Association and under the leadership of national secretaries. It is attended by young women from the college, Normal and city associations of five states. This year three hundred young women took possession of the hotel and for ten days held Capitola captive.

They were ten days in which business was combined with pleasure in a thoroughly delightful manner. A charming feeling of fellowship and good will and real girlish happiness existed, yet underneath it all was a spirit of genuine earnestness and loyalty to purpose. The forenoons were devoted to conferences for the discussions of various kinds of work—student, city, missionary and Bible work. In the evenings addresses or lectures were given, and among the speakers were Dr. E. S. Chapman of Los Angeles, Dr. C. R. Brown of Oakland, Dr. H. H. Bell of San Francisco, Dr. Maude Allen of India, Miss Watson of Egypt and Miss Swartz of Japan. The afternoons were devoted to recreation—sea bathing, sailing, driving and tennis.

On the last day of the conference a banquet was

ALLENIAN SOCIETY.

given. There was a great deal of merriment over the toasts, and one of the most clever was that made by Miss Estelle Brown, in her response to "The Minority." The Minority consisted of the two leaders of the Bible classes, Mr. Shelton of New York and Mr. Kennedy of the University of California.

To every girl who attended it the conference meant new purposes, higher ideals and a better conception of all that the Association stands for; and our society has received an impetus which means larger and better things next year.

The graduating class is taking from us twenty-one of our members, and it is with a great deal of regret that we let them go. On June 17th a "farewell" was given by the Y. M. and Y. W. C. A. in honor of their graduates. Each guest was informed in his invitation that he was to "Go-a-go." He discovered on arriving at the appointed place that to "go-a-go" meant to take a walk, a progressive walk, and that its destination was an Indian camp fire around which funny stories, college soup and sandwiches were served indiscriminately.

Y. M. C. A.

All know that the Young Men's Christian Association is one of the strongest college organizations in the world. Every leading college and university in the United States has an organization of this kind, with a membership of from one-third to three-fourths of all the students enrolled. Every year men from these colleges and universities meet at some special place to get new ideas. The colleges on the Pacific Coast have their meeting place at Pacific Grove.

Last year we sent as our representatives Messrs. Hough and Weed, and our society has been growing rapidly ever since. They seemed to bring a new spirit back with them which has remained with the society to the present time. The new ideas they received have been of lasting benefit; and we hope that others may be so fortunate as to go in the future and return with similar benefits.

At the beginning of the term we took up "The Life of Christ," as outlined by Burton Sharman, with Mr. Graves as teacher. We all feel that we have gained a great deal through this study, both spiritually and intellectually. It is a pleasure for us to look back on the many interesting and instructive lessons of the past term. Let us all work together in making our society next term equal in spirit, if not in numbers, to those of other leading institutions. Among the June graduates of the school the society will lose four of its members, who have been with it from its organization; yet we feel that with the members gone the society remains in a thriving condition.

SHAKESPEARE CLUB.

The Shakespeare Club is one of the oldest organizations in the Normal. It is a small body, limited to twenty members, and is governed strictly by parliamentary law. It is conservative in its principles. The aim of the Club is a knowledge of the Shakespearean plays. There are no diplomas of graduation given by this organization, as those who leave when they are graduated from the school are still called members, and are expected to contribute papers of interest and help to the society when they are able to do so.

The officers of the club for the past twenty weeks were: President, Miss Price; Vice-President, Miss Rothe; Secretary, Miss Abraham; Treasurer, Miss Duncan.

BROWNING.

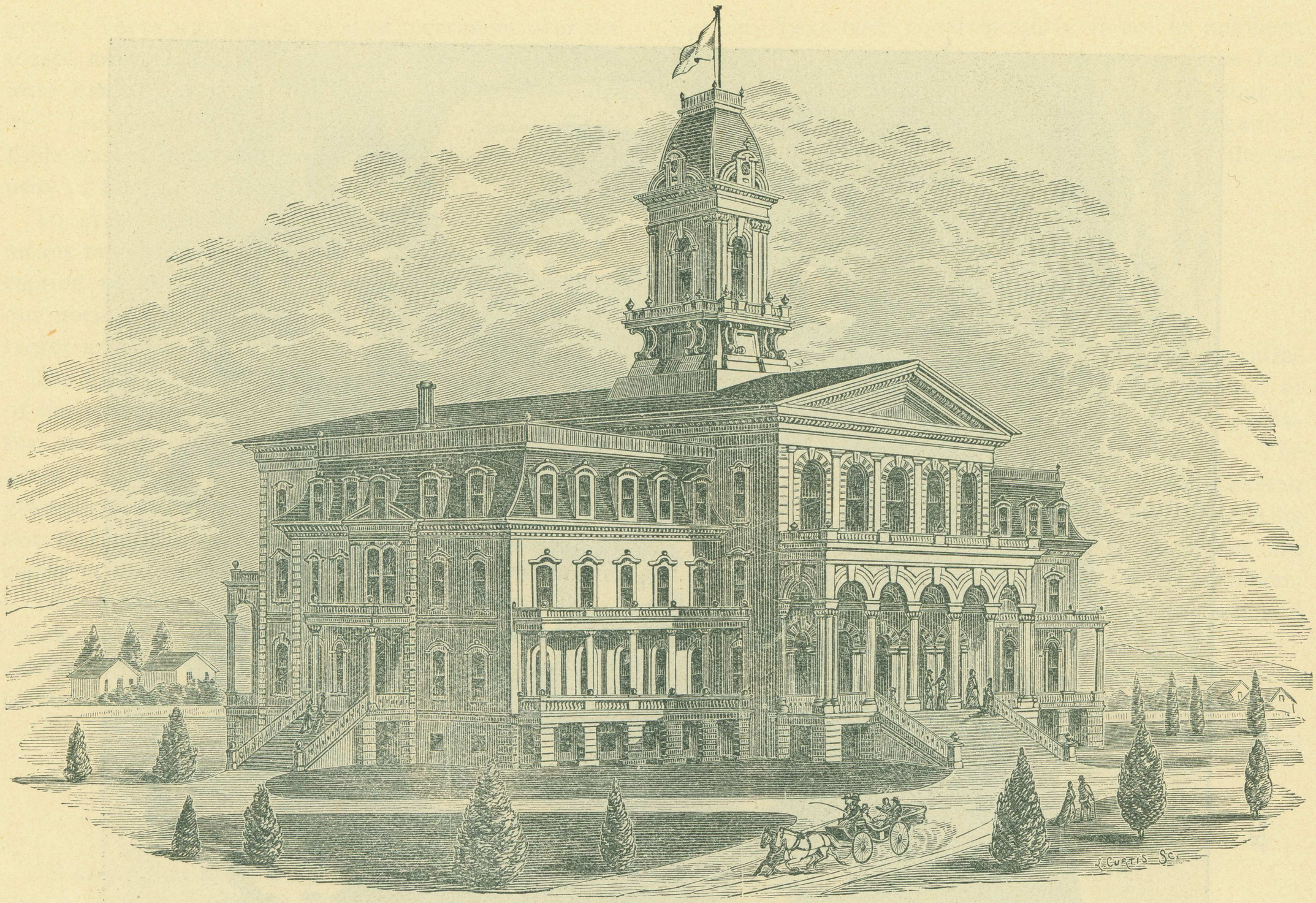
Another school year has passed and Browning is still in the flourishing condition that has marked its career throughout. The officers during the past ten weeks have done a great deal toward the welfare of the Club, and in fact all the members have added to the interest of the weekly meetings by responding cheerfully when placed upon the programs.

We have had many delightful social affairs during the year, but probably the most enjoyable of these was the outing on the Bay, given on May 10th, in honor of Browning's birthday. The members of the Club were well pleased with the success of the trip, and many were the expressions of delight from those who were our guests on that occasion.

Browning loses some of its most active members with the present graduating class. A reception was given in honor of these girls on the evening of June 18th. The graduates are: Misses Bertha Reid, Zippa Holland, Mamie Sullivan, Agnes Hoey, Nelle Flanders, Adah Williams and Mrs. Myrtle Hall.

The retiring officers of the society are: President, Mrs. Hall; Vice-President, Clara Powell; Treasurer, Maud Hine, and Secretary, Barbara Burkhalter.

ART CLUB.



The Old Normal School

Destroyed By Fire February 13, 1880.

Editor *Pennant*

You ask for an article on the old Normal School. In order to make the contrast sharp and telling, I will speak first of the old building. Any one looking at the picture, as it hangs on your wall, will observe that it was much more imposing and beautiful than the present structure. It seemed, however, to have been built for outside appearance rather than for inside accommodation. There was room for a school of four hundred, but accommodations for none.

When I came into the school, in 1872, only the basement and a part of the first floor were completed far enough for occupancy. Moreover, there was not a yard of carpet or matting in the building —only bare walls with enough very common chairs for the use of teachers and a few visitors. There were perhaps, 150 student desks and four for the teachers. There was practically no illustrative apparatus, a very small library, and four cheap clocks.

Morning exercises were held in the basement, and recitations in four rooms on the first floor.

Of the school, this may be said: The faculty consisted of a principal, vice principal and two assistants. I came in as the fifth member, avowedly Professor of Natural Science, but teaching anything from music to methods. There was no training school—the present bug-bear, no clubs—Browining or otherwise; no societies—none of the many things that surround the students of to-day, and that tends so much toward both comfort and culture.

There were, however, a body of willing, earnest students and a faithful body of teachers. Notwithstanding many restrictions, fairly good work was done. And it had to be done. The Normal School had to win its way into public favor. The whole idea was, on this coast, comparatively new. Few people had any clear idea of what a Normal School really was. To a much greater extent than to-day, every graduate became an exponent of the school

BROWNING SOCIETY.

SHAKESPEARE CLUB

beholder to solve the riddle of which color is most rampant, which figure most aggressive.

It should be a room where one might rest, and muse and grow strong.

Take down your torn, soiled maps, your dusty charts, and anything else that may clutter up your walls. Now your room is ready for a thorough cleaning, a physical baptism—the spiritual one will follow. Have your window curtains freshened or renewed. Mend or clean your maps and charts and roll them and put them away until you need them.

Upon this foundation you may proceed to build your "house beautiful." For the first time proceed with caution.

Who may estimate the inspiration or benediction of a beautiful picture; the visions, beatific, hidden in gleaming bust, or pure relief instinct with life; the joy and peace shed around by a growing plant! Great things need to be treated greatly. Great things give themselves fully only to those who seek and seek earnestly. A noble canvas like the Mona Lisa, over which the great Leonardo lovingly poured his soul for four years may have a message if you but await it. Edwin Booth studied Hamlet twenty years and then changed his interpretation of the character. You should as soon expect to get at the heart of that drama with one reading as to suppose that you touched the heart or heard the speech of the great Michel Angelo by glancing at the ceiling of the Sistine Chapel.

Get some good wall pictures, large enough to carry across the room, and beautiful enough to grow on you day by day. And be sure that the beauty is innate and not of the surface sort that will pall upon you. Eschew the Mrs. Jarley's waxwork sort, as you would the plague.

In this day of good and cheap reproduction of masterpieces you can have almost anything you wish. But that is the trouble—there is so much to choose from and we want so few. What shall they be?

First, know what is good. Second, get something in line with the taste of your pupils—leading them later into broader sympathies.

While photography has brought the great paintings close to us the plaster cast has brought us the great sculpture. So for a few dollars you can have a beautiful head by Donatello, a charming relief by Luca della Robia or a great Parthenon frieze; while for the fraction of a dollar you can get good small reliefs and intaglios. But here, as with the pictures, you had better get one good piece for the wall instead of many small reliefs.

Never have many pictures on the walls at a time, unless it be a special occasion for illustrating some subject or master.

With the many penny and nickel pictures available (such as the Perry, Brown and the Cosmos prints) there is no reason why the teacher should not have a goodly number of fine things. But keep these conveniently put away in folio or letter file until there is call for them—and this should not be infrequent.

Even your wall pictures would be more effective if they had to abdicate occasionally and retire with face to the wall in the closet. But never permit a picture to be a meaningless thing—an unrecognized factor in the school-room. If it has no purpose burn it up and avoid the accumulation of dust on the frame. But if it is worthy, then sit at its feet and learn its message, and wisely lead the little ones till they, too, feel its life. And remember this comes not from laborious analysis any more than the joy of a poem comes so. Would you seek to analyze flitting shadows in sunlit glades, or gleaming clouds in western sky? Never! Yet the laborer might dig at your side and never see either. What might one rapt word do! See to it (as much as in you lies) that those about you come into their inheritance. "Impart the gift of seeing to the rest."

To quote from Prof. John L. Lowes: "The first thing to do with a picture is just what Keat's suggests for a poem, to 'wander with it, and muse upon, and reflect from it, and bring home to it and prophesy upon it and dream upon it' until it serves as a starting post toward all the two and thirty Palaces."

A few of the good things to be found among reproductions for the school—

IN LANDSCAPE

Corot—Dance of the Nymphs.
Corot—Lake at Ville d'Avray.
Corot—Paysage.
Daubigny—Springtime.
Inness—Autumn Oak.
Rembrandt—The Mill.

STUDY IN ANIMALS.

Mauve—Sheep (and landscape).
Troyon—Oxen Going to Work.
Dupre—Milking Time.
Rosa Bonheur—The Horse Fair.

FAVORITE HEADS.

Hofmann—Christ (detail Christ and the Doctors).
Van Dyck—Baby Stuart (detail of Children of Chas. I.).
Millet—Charcoal portrait of himself.
Sargent—Hosea.
Sargent—Daniel.

Rembrandt—Detail Anatomical Lesson.
da Vinci—Mona Lisa.
Countess Potocka.

THE FIGURES.

Millet—The Sower.
Millet—The Gleaners,
Millet—Going to Work.
Van Dyck—Children of Chas. I.
Michael Angelo—David (sculpture).
Michael Angelo—Delphic Sibyl.
Murillo—St. Anthony of Padua.
Hofmann—Christ and the Rich Young Man.
Hofmann—Christ and the Doctors.
Watts—Hope.
Watts—Sir Galahad, Love and death.
Richter—Queen Louise.
Burne-Jones—Circe.
Harry Bates—Listening to Homer (sculpture).
Harry Bates—Hounds in Leash (sculpture).

MADONNA'S.

Raphael—Sistine Madonna.
Raphael—Madonna of the Chair.
Murillo—Immaculate Conception.
Murillo—Holy Family.
Dagnan Bouveeret—Madonna of the Work Shop.
Defregger—Madonna and Child.
Guido Reni—Mater Dolorosa.
Barabino—Madonna of the Olive.

Some publishing houses furnishing good reproductions of picturet are—

Milton-Bradly Co., McAllister Street, San Francisco; agents for the Brown pictures. These are well printed and pleasing. Size 9x12, price 3 cents each. Wall pictures 19x 25, price 25 cents. Of course not fine at this price, but often satisfactory.

Perry Picture Co., Boston. Satisfactory small pictures 6x8, at one cent each.

Cosmos Co., 296 Broadway, N. Y. Found at book stores in every town. Sizes, 6x8 and 9x15, price three and five cents. Excellent reproductions.

J. C. Willer Co., 123 Fifth Ave., N. Y., have reproductions of all prices and gualities, from 1 cent to $40 each, and cheap wall pictures at 25 and 60 cents.

All firms furnish catologues of some sort.

CALTHEA VIVIAN.

News and Notes.

On May 27th and 28th, Miss Evangeline Hart and Miss Lydia Campbell of Dallas College, Dallas, Oregon; Gertrude Vernon and Ida Yoder of the State Normal School at Monmouth, Oregon; Mabel Gaines and Ina Mayer of the State Normal School, Cheney, Washington; Beryl Shahan of the State Normal School at Whatcom, Washington; Miss Kingston of Ellensburg Normal School and May Le Sourd of Puget Sound University were the guests of the Y. W. C. A. of this school. These young ladies were returning from the conference at Capitola. A basket luncheon was served on the lawn by some of the students and members of the faculty and a pleasant hour was enjoyed by all present. In the afternoon Dr. Maud Allen talked to the Y. W. C. A. on methods of teaching in India. Tuesday evening the guests were taken for a trolley ride and Wednesday morning they visited us in the Assembly Hall. They left on the 9:20 train for their homes in the North.

Realizing what is due our dead soliders, Memorial exercises were held in Normal Hall on the morning of May 29. A number of the members of the G. A. R. were present and their white hair and bowed figures added to the solemnity of the occasion. Several musical selectionss were rendered, among

which was a solo by Miss E. Blasdell. Miss Howe read a very interesting article by an English writer, who gave the effects of our Civil War on England, and the English opinion of Lincoln. Major Colter gave a pleasing address which was followed by a short talk by Chaplain Thompson.

We are glad to learn that the Students' Book Store is in a thriving condition. As this store is managed by a San Jose High School and a Normal student, the students of these schools feel personally interested and help the boys along. The undertaking was planned for the purpose of retailing books at cost, and this has been carried out faithfully. The boys say they intend to carry a full line of both High School and Normal books next term, and their success is assured. The present managers are Casper Ornbaum of the Normal and Granville Vnicent of the High School.

The 4 B's gave the customary reception in honor of the graduating class, Friday evening, June 20, at the Vendome. The hall was beautifully decorated with the June class colors and potted plants. The evening was spent in dancing, music being furnished by Erohaska's orchestra. Between the dances the guests promenaded the corridors and refreshed themselves with the delicious punch served. According to the report of those present the affair was most enjoyable and showed the ability of the 4 B's as entertainers.

The High School Class which has been under Miss Howe's supervision since September, 1900, has always been noted for the enthusiasm which they show in everything they undertake. The interesting farce entitled "Shakespeare's Ladies" which was presented before the student body on the morning of June 3, showed the ability of some of its members in that line. The characters of Juliet, Portia, Ophelia and Lady Macbeth were most successfully portrayed by Janet Bell, Aimee Meachen ,Alice Wehrly and Florence Porter. That the young ladies did themselves and their class credit was the opinion of all present.

The Normal Club held its last regular meeting for the school year on June 10th. Interesting papers were presented by President Dailey of the High School, Professor Shumate of the High School, and Miss Nicholson of the Normal department of Literature. The question of State Federation of Teachers was taken up and thoroughly discussed. The Normal Club has been an important factor in our Normal School work this year.

A. H. Suzzallo, who was graduated from the Normal in the June class of '95, has returned to his home in San Jose after completing a post graduate course in Columbia University and will take his chair in that institution at the opening of the fall semester.

Class night is always looked forward to with the keenest sense of expectation on the part of the friends of the graduates. This is the time when the members of the class give their best efforts to please and entertain.

The pleasant June nights seem to call for an out of door entertainment, and it was this thought that finally resulted in making use of our beautiful lawns. We think we never before fully appreciated the beauty of our campus as on the night of June 19th, when the trees were strung with a profusion of pretty, many-colored lanterns, and here and there over the lawns were couches, behind which were banked tall palms drooping gracefully over those who wished to sit durin gthe evening and listen to the melodious strains of an invisible orchestra. The refined, quiet, yet brilliant tone of the whole affair was felt by every one present, as it was expressed in the minutest detail.

IVY DAY.

In Eastern Colleges there is always a day set apart during commencement week for the class' linking in a chain for its last combined effort to beautify some part of the campus. Ivy Day is looked forward to as one of mingled joy and sadness.

The June class has felt that such an innovation into the customs of our school would add much to the tone of commencement. The twenty-fourth of June dates hte first Ivy Day in the history of the Normal. Mr. Cuthbertson has the distinction of being the June class orator, and Mr. Brennan the responding orator from the undergraduates. The silver trowel that we leave with our Alma Mater, we hope will be used in the future to continue this custom instituted by the June class of 1902.

FIELD DAY.

The event of the season will be the field-day between the Faculty and Senior Class on June 23. The Seniors challenged the Faculty, and as the Faculty wanted to win back their lost laurels of last year, when they suffered a terrible defeat at the hands of the June Class, they accepted the challenge, provided that they could

Y. M. N. D.

have a part in choosing events and fixing the handicap for each contestant.

The two committees met—and as might be supposed, the Faculty began choosing events in which they were sure point winners; and had not the Senior committee awakened to the fact the field day would have been a one sided affair. The following is the list of events as they were proposed and accepted:

Fat Ladies Race—50 yards. Each contestant weighing over 200 pounds to be given a handicap of 40 yards.

Slim Ladies Race—50 yards. Each contestant over 30 years to get a handicap of 25 yards.

High Jump—Balloons allowable to Faculty.

Broad Jump—Faculty allowed spring boards.

Shot Put—Faculty, 5 yards handicap.

Potato Race—Faculty given two potatoes handicap.

Egg Race—25 yards. All after first and second to eat the eggs.

Suggestion—Be sure the eggs are cooked.

Wheel-barrow Race—50 yards. Faculty allowed ball bearing wheel and pneumatic tire.

Walk, 50 yards—Free for all, no handicap.

Relay Race—200 yards. Faculty may ride hobby horses if they choose.

Bicycle Race—One-fourth mile, one-eighth handicap given the Faculty.

There will be some special races, but they have not yet been decided upon. First is to count five points and second, three; the winners will receive valuable prizes.

What others say: "The Faculty should win the meet as they are sure of first place in the following, Fat ladies race, Slim ladies' race, High jump, Broad jump, Wheel-barrow race and walk." —A. B. C.

"Every one looks for a Faculty victory, but the Senior Class is an unsual class so you can expect a great deal from them." X Y Z.

"The Faculty have a sure thing as they have stated that they will condition all of the good athletes from the Senior Class just to win the meet." C. A. V.

"The Faculty will do anything to win." A. M. C.

The graduating class will give a reception in the Normal, Wednesday evening, June 25. The corridors and primary hall will be decorated with potted plants and the class color, lavender. As this will be the last time the class will entertain, we shall spare nothing in making it a pleasant farewell.

Miss Payne is now visiting friends in Philadelphia and Cornell University and will go from there to Brooklyn. She expects to spend the summer in the White Mountains and then to return to San Jose in August to resume her work in the department of Literature in this school.

ALUMNI NOTES.

Miss Dora Dill, who has been teaching since '98, near her home at Clements, is visiting her sister who attends the Normal.

Among the Sigma Theta Chi alumni who have been seen in the corridors lately are Genevieve and Elizabeth McBride, Laura Bailey, May Hayward, Beatrice Johnson, Agnes Mason and Lulu Spangler.

After a year's pedagogical work Charles Townsend has returned to his home in San Jose.

Franklin Talbert, February '02, was seen in the halls after the close of Stanford, where he has been pursuing the university course.

Mr. Otto Mouron has completed the course in pharmacy at Berkeley University.

Gertrude Dalton, June '95, is visiting her sister of the June class.

Ella Roll, June 1900, has been attending Stanford this year.

Iva Gelatt and Marguerite Hawley, June '01, are both teaching in Hanford, Kings county.

Gavin Telfer, June 1900, has just returned from a year's work of teaching in Ventura county.

Ada Nyman, June 1900, has taught in Fresno county for the past year.

Alva Christman, June 1900, has been teaching in Santa Barbara county.

Mable Pfau, June '95, has been teaching near Paso Robles.

Myra Waltenspiel and Sadie Holmes have been taking the course in advanced history with Miss Howe.

Anna McNary teaches in Fresno county.

Bessie McCabe has been teaching the Mt. Pleasant school, Santa Clara county.

Charlotte Douglas is teaching in San Luis Obispo.

Lelia Clark, June 6'9, has been teaching in Evergreen.

Maude Wilber has a school in Arizona.

Cosa George and Rose Fleisig, June '01, have both been teaching in Bradley, Monterey county.

Georgia Rattan has been attending Berkeley.

Sadie Holmes, June '01, has taught in Reedley, Fresno county.

Julia Jones, June '01, has a school in Tipton, Tulare county.

Bertha Freyschlag, June '01, has been teaching in Lakeville, Sonoma county.

Cora Ripley, February '02, has a school in Lassen county.

Mrs. Joseph Leonard, June 1900 ,has taught in Sonoma county.

Winnie King, June 1900, has been teaching in Fresno county.

Artis Metzger, June 1900.

HOW THE FLAG WAS PRESERVED.

As usual the followers of the green, in other words the green class (4 B's), were skulking about with long countenances and lowered eye-brows, studying hard how they might rid themselves of the hard luck which fate had stamped so conspicuously upon them. But it was all in vain, and they were only digging other pitfalls into which they were to be cast. They thought to themselves in this wise, soothing their wounded feelings: "We have the numbers and the brawn (and the Senior flag to get) and we cannot see why the victory should not remain with us." They never once stopped to think how unequally matched is the warfare of brains vs. brawn.

The flag was completed and hidden but we wanted to have a little more fun with the 4 B's. It was presumably put into a hand-satchel owned by one of our co-eds.

"Come on, Bill," said Bert, "there she goes, we'll have it now."

"Sure, there's nothing to it," says Bill.

A terrific battle ensued, in which, of course, to make the joke secure the satchel was finally handed over.

The two winners (?) of the contest pounced upon the coveted prize, like two ravenous turkey-buzzards upon a long anticipated feast. But, when the satchel was opened and the small scrap of lavender, which was used as a bait, was taken out, you could have bought the two of them at half price, or ten cents.

AFTER THE "RUSH."

After the "rush" was over and the 4 A class had come out victorious, the 4 B class determined to get the better of the 4 A's by painting '03 in all of the prominent places in the Normal Square. They began painting about half past nine and at eleven o'clock nearly everything that dared to be painted had a coat of green—backstop, handball court, post and pavement all shared alike with green '03.

The 4 A's, thinking that something was being done by the 4 B's, made an investigation and not to their surprise found everything as stated above. The 4 A's could not be beaten after winning so great a victory in the "rush," so they planned to get some paint and cover the '03 with '02. One of the boys went after paint while the other made a hasty search for his comrades—this took place at two o'clock in the morning. Each succeeded admirably for when they returned, one had a quart of paint and the other had a gleeful aggregation of Seniors. They began painting immediately and at half past four the red '02 had covered the green '03. Poor 4 B's, their work was all done in vain.

We wish to thank them for making the designs and putting on the first coat as our painting would never have looked so nice had it not been for theirs. We hope the 4 B's will not be so foolish as to put their money in so poor an investment any more for their paint could scarcely be seen after the '02 coat had been painted.

One of the pleasantest of the many pleasant parties of this season was the one given June 12th, by Las Amigas Club in honor of three of its members, Elizabeth Marcus, Leona Bayley and Adeline Hedley, who are to be graduated with the June class. A special car took the club and its friends, some forty or more, to Alum Rock Park at seven p. m. A walk up the canyon commenced the fun. After many haps and some mishaps the party all gathered for refreshments, which were up to the high mark always attained by the caterer of Las Amigas. A long table accommodated all the people, while Chinese lanterns strung overhead threw a subdued light over the scene. Games and dancing interspersed with some music nad much fun made a merry evening and all boarded the eleven o'clock car to return to a thought of work for the next day voting it "the best time we ever had."

Stage Driver—After leaving Smith's Creek we ascend 2,500 feet, travel 7 miles and make 365 turns.

Miss Dietz (when nearly the top)—Mr. Driver, are we on the other side of the mountain yet?

Driver—We don't go on the other side.

Miss D.—I thought you said we would go around the mountain 365 times.

A Dissertation on Something Different.

Who nowadays is original? Is there any such thing as an original person? An old aphorism, "old enough to be new again," says that no two persons in the world are alike. While this is true, is there any person who has a single characteristic that somebody has not had before? Modern science shows us that we are bound volumes of all our ancestors from Garden-of-Eden days. We inherit our looks—that is, unless we happen to be beautiful; in that case we do not usually inherit our beaty—that is always our own, you know! We inherit our little tricks of expression, our manner of walking, talking, laughing; we inherit our characters; in short, everything that helps to make us what we are is inherited. So it would seem that there could be no original person.

However, before discussing further this question of originality, there must be some conclusion arrived at as to the meaning of the word. There may be several meanings taken from this word *original;* for instance, a person may be original in that he does things nobody else does—that is, his actions are original. A thing said or done is said to be exceptional when it has never been presented to those who see or hear it in the same manner before; and, so far as those interested are concerned, the thing is original. But somewhere, some time, somebody has done the same thing, has said the same thing, has thought the same thought, dreamed the same dream. The thought may have been presented in a different way, the words spoken in a different tongue, but they are the same old thoughts and words.

Then, again, *original* may be taken to mean the primal things—the things that were first. In this sense the only original things that ever were or ever will be were the things that God created in the beginning. Science tells us that no matter is destructible. In that case there has never been anything new since the first stars and planets made their appearance, since the first sunrise dyed the sky with splotches of crimson and flushed the hills with purple haze, since the first man walked in all the glory of his strength and beauty upon the first velvety green of the earth and rejoiced in the beauty around him.

Since then there have been things created,and they are being created all the time—that is, old forms are put together in different ways, so that there is never exactly the same combination. A thing may thus be new and not new, according to the meaning we take from the word. In a general sense, however, we may say that when a thing is said to be new, it is a combination of really old elements; and when a person is said to be original, there are combined within his nature certain elements which are old in themselves, but together form a character different from any that has ever gone before.

To attract very much attention nowadays from the hurrying, tumultuous world about him, a person must have some distinctive talent, something in his character that makes it different from the character of the average individual. A person who possesses such a distinctive quality generally makes his way in the world. He is said to have original ideas, and to be an original person. Where other persons, following in the beaten track, have found barriers to further progress which they were powerless to surmount, the original man will find a way over. Things difficult and confusing to others straighten themselves out before him because he does things in his own way. He does not do things just as other people do, but works them out for himself and thus escapes the stumbling blocks against which his predecessors bruise themselves.

Originality may develop along either of two lines: it may run to genius or it may degenerate into eccentricity. The names of those men whose originality has developed into the rarest genius, and whose influence moves the world, are household words; and types of those whose originality has become eccentrical are found by thousands around us in every-day life. I once knew an old man who was original in that he was eccentric. He took great pride in saying that never in all his life had he done anything as anybody else would have done it. When he was a boy, because all the other boys wore clothes of the prevailing style, he invented all kinds of garments that were as unlike as possible to any that were ordinarily worn. If he found that anything in the way of clothing of his resembled that of somebody else in the remotest degree, he would discard the obnoxious garment. His other ideas were as peculiar as his ideas about clothes. When he was a young man his father wished him to go into business; but everybody went into business—that was

common. His father finally persuaded him to promise that if he were given a ranch he would care for it. The ranch, well stocked, was placed under his charge; and, in spite of his theories, he managed to stay at the ranch for a week or two. Then one day he came back to town and stayed. His father, supposing he would go back soon, said nothing until the boy had stayed two weeks, and still showed no inclination to return. Thinking it might be well to remind the boy that he was responsible for the ranch, the father one day suggested to Jack that he go back to see how the horses were getting along. "O, I sold them long ago," was Jack's nonchalant reply. He certainly had original, in the sense of crude, ideas as to gratitude and responsibility.

Another old man who has come under my observation the last few years is another very good example of originality turned into eccentricity. This old fellow is original in every way, and in all senses of the word. He is original in his personal appearance, which much resembles that of our "original ancestors who were fonder of trees than we are." In his habits, which correspond generally with his appearance, he is slowly returning to the original element from which he came, for he is literally covered with dirt. His actions, to put it mildly, are extraordinary. For instance, he was one day out in the street, gesticulating wildly, jumping up and down, waving his hat in the air and shouting something at the top of his voice. On being questioned as to the meaning of his peculiar behavior, he said he had often been told that the sight of the flag of their country inspired soldiers with an intoxicating feeling called patriotism. He had never been a soldier, but desiring to experience a thrill of patriotism he had imagined he was shouting for his flag; and was so successful in conjuring up to his mind an inspiring scene that he was quite carried away. He does many other strange things; but his particular specialty is falling off things. His daughter will not let him climb the ladder to pick fruit from a tree because she knows his liability to this particular form of gymnastic performance. It would be exceedingly dangerous for him to travel in Mark Twain's Switzerland, or anywhere where there is a sharp slope. And this falling down—he does it with such a bland and patient expression that it is really quite heartrending to witness one of these unpremeditated performances. If one watches him long enough as he walks up the steps, he will see Sporty, as he is called, lose hold of himself, fall down, and roll gently to the bottom, his bow-legs waving in impotent deprecation, as who would say, "You see what always happens; I can't help myself!" Sporty picks himself up calmly, without having done any harm except to add another layer to the sheet of rock waste that is slowly accumulating upon the old plain of his face, and which bids fair in time, if undisturbed, to fill up the ravines and hollows and leave his nose a buried mountain range. There is nothing else particularly striking about this old man, except that he is very thin—but this is not to be wondered at when you remember that he has been falling off all his life. The wonder is that there is anything left of him.

Children are always original; they never say commonplace things. They have nothing to judge things by in their small experience, and the effort to express their ideas of natural phenomena and occurrences in daily life often results in very original sayings. These sayings are often very poetic. I know a little girl who frequently says very quaint things—things one would not expect to hear from a child and from few grown people. She is a poetic little thing, and the mysterious beauties of nature appeal to her very strongly. One night she was sitting with her mother on the porch. The night was a beautiful one, and the stars were out in all their brilliancy. Something in the profound vastness and beauty of the great jewel-studded dome appealed very strongly to her childish mind, and she sat silently gazing into the sky for a long time. Finally she said in a rather awe-struck way, "Mamma, what a beautiful place heaven must be, when it is so pretty turned wrong side out." This same little girl on another occasion stood watching the smoke from a newly kindled fire curl out of the chimney and roll away on the heavy air. The next morning she happened to be up early, and as the sun rose the fog rolled down from the mountains in long curls and waves of vapor. Running inside to her mother she exclaimed, excitedly, "O, mamma, come out and look, quick! God is building his fire!"

But after all, who is it that makes the world hold on the even tenor of its way? Can it be said that it is the original people, geniuses and otherwise, or the people who can boast of being nothing but average individuals? It is neither one nor the other, but both; it takes all kinds of people to make up the world. If everybody was an original genius of some sort, there would be no uniform system of carrying on the business of life. Everybody would be a man with an idea, and his idea would be the only one. Everybody would run his own affairs in his own original way in ac-

cordance with his own ideas, and not subservient to the general welfare. The world could not get along without some original men—men who have been born original and who have achieved genius—but they must have a basis upon which to work, and the vast majority of people who are neither geniuses nor eccentricities furnish this basis. It has been said that there is nothing worse than a lukewarm person; he should be either decidedly good or decidedly bad. But it is just these average people who hold up the civilization of the world; and while it is not a good thing to be mediocre in everything, yet it seems that we should have faith that "whatever is, is right"; and if we happen to belong to the great army of people who are average in most things, we can serve by doing the best we can and trying in all respects to "follow the gleam."

WINIFRED R. LEE.

Between Stations.

The train was late, and did not leave the station till nearly ten o'clock. There was some sort of an excursion, pretty well filling the cars, and the newcomer, a tall, athletic young man, sank down into the only vacant seat with a sigh of weariness. His glance wandered listlessly around the car, but suddenly something about the girl who occupied the seat across the aisle from him attracted his attention. Her face was turned from him, but she reminded him of—yes—Miriam Millward.

His mind reverts to his college days. In fancy he is enjoying a summer's vacation in the Adirondacks. He and Miriam Millward are rowing on the lake. At least, they had been, but now he is sitting thinking of nothing and caring for nothing except the girl among the pile of cushions in the stern of the boat. She is singing softly to a guitar accompaniment. He did not know what she was singing—he had asked her to sing merely in order that he might be free to enjoy watching her face. How well he remembers how the soft air, fragrant with the odor of flowers, blew her wavy hair about her broad, low forehead! What a perfect neck and throat she had! She was too beautiful, too perfect, to care for him. Still, he would ask her. But at that moment another boat came up beside them, and it was too late.

Just then the train gave a sudden jolt and he awoke from his reverie. The girl across the aisle turns her head so that the light is on her face and Barnabee finds himself looking straight into the eyes of her of whom he has just been thinking. He would have recognized her even if he had not just been thinking of her. And she, too, knew him at once.

"Rob Barnabee, is it really you?" exclaimed the girl, incredulously, giving him her hand.

"Well, it seems so," was the man's reply, as he crossed the aisle and sat down beside her. "Would you believe it, I was just thinking of you."

"I haven't heard of you in I don't know how many years. I didn't think California was so small that I should meet you before I had been here a month."

"How do you happen to be here, and what have you been doing all these years? My! but it's a surprise actually to see you after I had just been thinking about you."

"Thinking about me?"

"You and the good old times we had that summer in the Adirondacks. You haven't forgotten the night of your eighteenth birthday rowing on the lake, have you, Miriam?"

"No, indeed; and were you thinking about all this just now?"

"This very minute. Come to think, that was the last time I saw you. When I received that telegram to come out here, and went down to tell you good-bye, you were away, and what a lot of things have happened since then!"

"They must have been rather pleasant happenings in your case, Rob. The world seems to have treated you pretty well. But why didn't you let old friends hear from you once in awhile?"

"Well, you see, my people moved away when I came out here, and you had never asked me to write to you, you know."

"But you did not give me the chance," was the answer—spoken very low.

"And are you living in California?" he asked somewhat abruptly.

Just then the train stopped with a jerk, and the girl sprang to her feet with a cry of dismay. "This is where I change cars. I forgot all about it."

Barnaby stepped aside to let her pass; picked up her valise, and followed her out of the car, and onto the platform.

"Why, it's raining, and my train isn't in sight," he heard her say, as he stepped off.

"What shall I do?" and the girl turned to him with an appealing look in her eyes. He felt compelled to find some place where she could wait comfortably, and see when her train was due. Casting an apprehensive glance at the conductor, who was standing by the baggage car, ready to give the signal to go ahead, he started with her to the waiting-room. He had just settled her there comfortably when he heard the conductor call, "All aboard."

"Good-bye," he said. "I must run for it now."

"Come and see us," she answered.

The train was in motion by this time, and going faster than Barnabee supposed. The last car had left the end of the station platform a second before he reached it. He glanced back at Miriam standing in the door of the waiting-room. She did not know what a weariness and sickness of heart the fast disappearing train brought upon him. The faint look of pleasure in her face which he detected through her chagrin at having been the cause of his missing his train, for a moment pleased him, but for a moment only. If Miriam had only known.

"I am so sorry, Rob," exclaimed the girl coming up, "but my train will soon be here, and it is only twenty miles to my home. Can't you come and spend a few days with us?" But looking into the drawn, white face of Barnabee, her tone suddenly changed. "I'm afraid I've put you out very much; I'm so sorry. If you must go, there is a train that leaves here tomorrow morning at ten o'clock for the city." "Oh, it's all right," Barnabee managed to say, after he had pulled himeslf together somewhat.

He simply could not tell her that he was to have been married the next morning in San Francisco at nine o'clock.

MAMIE BROWN.

Gibralter, as Seen by A Resident.

On a peninsula of Southern Spain, and facing the Mediterranean, is a little city that for centuries has been world renowned for its great strength. At its front is an immense rock, more than a thousand feet high, and rising almost vertically from the sea. The strength of its position was seen by the Moors early in the eighth century, when they took possession of it and named it Gibel-el-Tarik, from which the present name Gibraltar, has been corrupted.

The rock was, at that time, fortified, but wars soon followed for its possession, until it finally fell under English rule. Since that time the strength of the fortifications has been continually increased, until at the present we find the front of the rock excavated and filled with cannon, ammunition and supplies to such an extent that the city could stand a siege for many months without any additional supplies; and we feel that as it now is, especially the rock at its front, it is a wonderful combination of the work of man and Nature, so combined as to make one of the greatest strongholds we can possibly imagine, and one that seem everlasting.

But to the American with his great love for absolute freedom, the little town, not more than two-thirds the size of San Jose, has many other features that cannot but be interesting. Being as it is, or has been, a bone of contention among several nations, it must necessarily be guarded with the greatest care. Accordingly, we find the town full of the well-known English "Red-coats," who are on guard at almost every corner, although the strength of the city, of course, lies in the fortified rock at its front. We may not realize what it means to be guarded throughout the city in this manner, until we are told that every person who may be out after a certain hour must carry a permit, which may be bought from government officials, and he must present this to the guards as he passes them on his way. As the streets are dark, and the guard would be unable to read the permit, the passerby must also carry some light, usually it is a lantern, in order that there may be no mistake. At the sound of footsteps the guard calls, "who comes there?" whereupon, the person, unless he be an army officer, must show his pass. If all is right, the person

may go on to the next guard, where he will again show that he has permission to be out at that late hour. If he fails to have a permit, he is taken to the guard house, and must pay a fine.

The thing that might seem strangest to an American visiting Gibraltar, is the wall that surrounds the city on the Spanish side. It was made by convicts, and is very high, and so broad that walks have been laid out on top of it, and people from the city are allowed to walk there, as we spend our time in our parks. Outside the wall, near the border of Spain, is a moat, in which the water is just deep enough to prevent people from crossing without boats. The only means of entering Gibraltar from Spain is by the means of a suspension bridge. This is guarded by English officers, and is raised each night and lowered each morning. The way in which it is moved is most interesting. The home of the governor and all the government buildings are in the heart of the city, and here the keys that lock and unlock the bridge are kept and guarded. The sergeant who has them in charge, and who is known to the children as St. Peter, stands ready to start with them from the buildings the minute the signal is given. This signal is in the form of a cannon-shot from the signal station on top of the mountain and is fired at sunrise and sunset each day. When the shot is heard, the guard starts forth with the keys, protected by four soldiers. When he reaches the bridge it is drawn up by the chains, and locked. From that time until the bridge is lowered again at sunrise, no person can possibly go from Spain to Gibraltar, or from Gibraltar back to Spain. The keys are immense, being more than two feet long, and are always kept highly polished.

At the bridge, just inside the city, is the English Custom House. The officers here have duties other than to inspect the goods that come from Spain. Every person who wishes to spend any time in Gibraltar, even though it be for only a few hours, must, before entering, obtain permission from the officials. The person is asked how long he wishes to stay and a permit is or is not granted. The name of the person and the length of time granted on the permit are registered, and when the person returns to Spain he must return the permit to the office to be cancelled. If, by the time it expires, it is shown by the register that the person has not returned, the police are immediately sent to arrest him, and he never escapes punishment. If a young man marries a Spanish girl, however, if he is a citizen of Gibraltar, he may take his bride to live in the city; but if a young lady who is a native of Gibraltar marries a Spaniard, they must receive permission, or they cannot remain there. Thus the English nation is able to regulate the number of foreigners within the border of her Mediterranean fortress. Were it otherwise, the population of the town might become largely foreign, and the strength of the city be weakened.

But I must not forget one place of interest that I have never seen mentioned in any description. It is the old Moorish castle on the side of the great rock. It was built by the Moors in the tenth century, when they held the city, but it is now held and protected by the English government. It is kept closed generally, but the people of the town still regard it as full of interest, especially since it is believed that somewhere within the walls are buried immense treasures of gold and jewels. As far as I know, it has no specially interesting historical connection, but it is certainly a great attraction to the traveler who visits the rock, and it seems to remind him of the age of the town more than anything else within its border.

EDNA RAUM.

Over The Bridge.

And did you say a leafy bower?
What visions have I seen?
A lofty arch, a plant, a flower—
Nay, more,—I see a wealth of green,
What wonder, prithee, doth it mean?

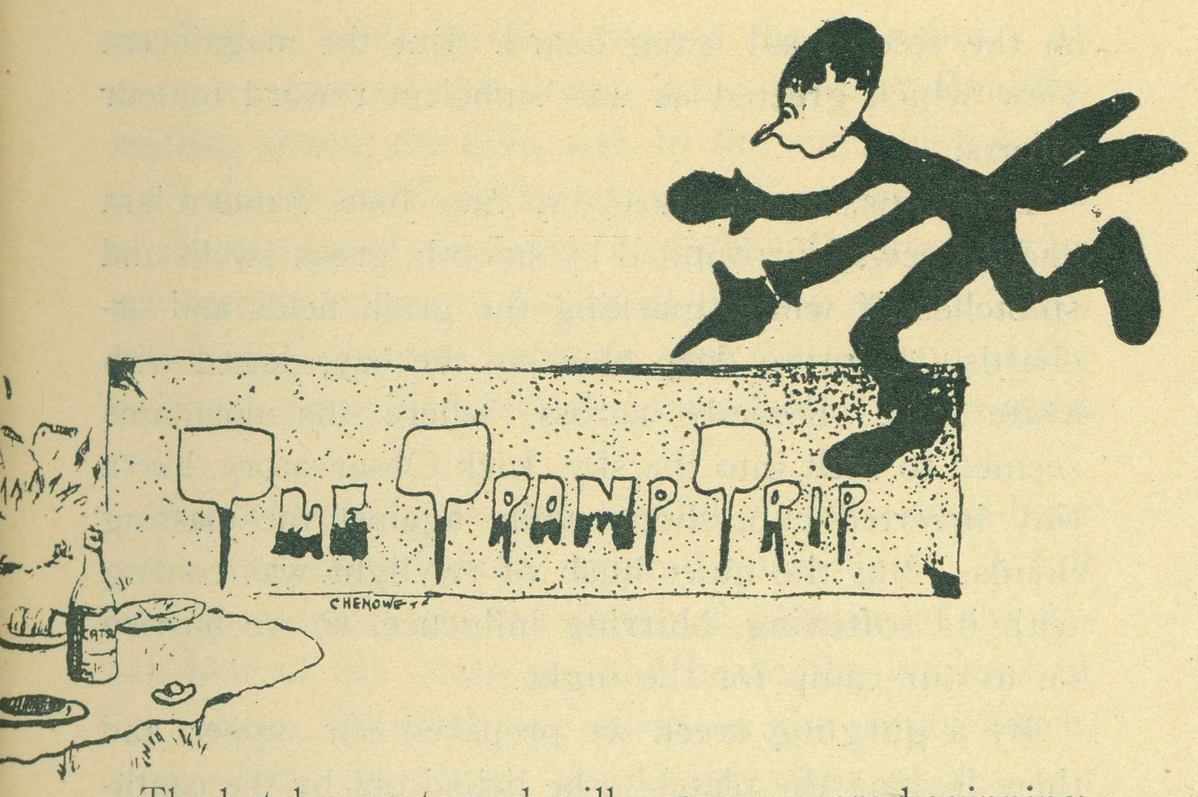
And can it be I have forgot,
Or let some grave dread hide
The beauty of a cherished spot
Whose phantom past my eyes doth glide
And lingering murmurs at my side?

Aye murmurs till it clamorous grows
Before my unveiled eyes
That yesterday with teacher's woes
Gazed blankly at the "Bridge of Sighs"
Nor saw aught there in beauties guise.

To-day, what mellow light is this
Steals in upon my dreams
Flooding the "Bridge of Sighs" with bliss
That permeates each nook, and streams
Among the leaves in radiant gleams?

Now clear as summer grows my mind
Those sunlit, creaping flowers
Along the bordered arbor lined,
Are those I loved in Freshman hours
To-day reset in daintier bowers.

E. C. B.



The butcher carts and milk wagons were beginning to rumble through the empty streets, and the first electric car to buzz noisily down First street, awakening San Jose into life, as we twelve Normal boys, clad in roughing suits, stout shoes and leggings, began our one-hundred-and-twenty-five-mile-tramp, Saturday morning, April 12th.

We had ten whole days to spend, tramping over plain, mountain, and by the seashore, and each one was determined to crowd as much enjoyment as possible into that time. Trout fishing in the rushing mountain streams, boating and bathing in the ocean, and sight-seeing in the interior towns, would cause the time to pass all too quickly.

We had organized as the April Adventure Company, and elected Richard Woelffel president, with Robert Reid as manager.

Directors—Milton Farmer, Everett Crane, Lawrence Chenoweth, Ernest Cuthbertson.

Stockholders—Alex Cuthbertson, Henry Bowman, Geo. Belz, Clarence Wilson, Harry White, R. Vorhies.

Our route was mapped out as follows: San Jose to Boulder Creek, via Saratoga, Congress Springs and Long Bridge; to Santa Cruz via Camp Logan, Ben Lomond, Highlands and Felton; to Capitola; to Watsonville, via New Brighton, Aptos and Five Mile House; to San Juan Mission; to Gilroy; to San Jose via Morgan Hill and Edenvale.

Our belongings were all loaded in a small one-horse wagon, which we christened "the barouche," but later changed the name to "carry-all," for it certainly became one, each member of the party adding from time to time a treasure in the shape of a rock, a shrub, or an attractive sign taken from some fence. One sign was a work of art. It proclaimed, "Pigs for Sale," and was given a place of honor on the side of the wagon. One day as we were nearing Santa Cruz, a long, lean, lank specimen of humanity, with a sort of brush attachment on his chin studied the sign attentively, reading it aloud, "Rig for Sale." Then pulling the before-mentioned brush, as though to make his thoughts flow, said, "Wall, I 'low as how if yer rig is fer sale, I might give ye a dollar an' thirty cents for the whole blame outfit, the horse throwed in." There is no need of telling how he was killed on the spot. The "spot" was carefully preserved as a souvenir.

We entered Saratoga through the famous sea of bloom and ocean of sweet odors. The valley of whitened plum and prune trees stood out pleasingly against the magnificent background of mountains rising a dull purple, splotched with dark green and tipped at their summits with light. Touches of the pink of apricot blossoms and the indescribable melting combination of pink and white in the apple blossom varied the prevailing white.

In response to our vociferous Normal yells, the natives turned out en masse, many believing that the circus had come to town. At a little grocery, where everything from pins to coffins could be purchased, we bought two dozen lovely eggs. Then we proceeded up the main street to the postoffice, where we met our first and semingly overwhelming disaster.

The steed which drew our entire possessions was unbridled to allow the partaking of some water. A childish shout, a wild flapping of wings with a few discordant squawks, and an excited hen precipitated the grand catastrophe. A snort, a plunge, and despite our efforts, the outfit began its wild career toward destruction. The scene which followed baffles all description. With a crash and swirl of dust, one of the wheels went to the bad. A rattle of tinware, as the cooking utensils flew wildly in the air, and a crash of glass, as the lantern, which had dangled so proudly underneath, gave up the ghost, preceded the rapid dissolution of the entire load. It was a case of—

"Blanket to the right of us,
Coffee pot to the left of us,
Frying pan in front of us,
While two dozen eggs volleyed and
thundered."

Down the main road sped our equipage, then there was a lurch and the runaway turned up a side road, ran into a yard, around the house, through a narrow gate, ungracefully hanging the wagon, which refused to go through the gate, up on the fence. After carefully counting noses several times to see if by

mistake there were thirteen in the party, we set to work to clean up the wreck. An hour later everything was repaired and we were ready to go on. Before leaving, however, one of the party mounted an old cultivator which stood in the street and made a little speech: "Ladies and gentlemen, we have our horse trained to give the little exhibition which you just witnessed, in every town, and then we take up a collection. I will now pass among you with the hat."

Passing through the cool Congress Springs, we pressed on to Long Bridge, where we camped for noon. Here we cooked our first meal. Here the shining tinware got its first tinge of black from the open fires. We lazied by the swift falling stream until the early afternoon, when we started for the summit. Right here we began to realize that "distance varies according to the person you ask," and made it a law.

on the steep road being heard. But the magnificent view which greeted us was sufficient reward for our efforts.

Below us, in the haze, lay San Jose, Santa Clara and Agnews, surrounded by smooth, green swells and splotches of white, marking the grain fields and orchards. Glinting deep blue lay the bay, dotted with white sails. Directly across, where the mountains seemed to melt into the sky, Lick Observatory, like a tiny inverted cup, shone white against the massing clouds. But the quiet hush of twylight was coming with its softening, blurring influence, so we hurried on to our camp for the night.

By a gurgling creek we prepared our supper, and then, leaving the plates to be licked out by the panthers and bears, we gathered around a huge camp fire and had a grand jollification. We had covered twenty-two miles, but this did not send us to our blankets

AT CONGRESS SPRINGS.

A frayed-out individual, known as Buckskin Pete, assured us that the summit was the longest ten miles we had ever seen, while a husky lad, called Sam, said that it "wasn't moren' four mile, an' he'd walked it meny a time in three-quarters of an hour, an' he'd eat his old hat if it wasn't." Buckskin Pete remarked that "he'd better begin to nibble on it right away," and rode off up the road.

At five o'clock we stood on the summit overlooking the broad Santa Clara Valley. Far in the rear the wagon was laboring upward. The last mile and a half had been a stiff climb. Nothing except the monotonous, yet rythmatic "thud, thud," of our walking sticks

until a very late hour. Hardly had we fallen asleep when a herd of cows came blundering into camp. As one man, twelve forms sat upright, twelve tonseled heads opened and a yell, which would have put a band of Indians to shame, sent the startled cows flying in all directions.

The tramp Sunday morning was an ideal one. Seventeen miles winding down the mountain sides through the broad leaved maples and glistening hazel, with the warm sunshine streaming over the hills, mottling the tree-tops with gold and setting free from the ground that strange earthy odor. A light breeze set the trees singing their songs in rivalry with the

numberless birds caroling among the branches. At noon we reached the pretty little town of Boulder, nestling among the hills, and, by the way, the town is not quite as hard as its name. We spent the rest of the day quietly in camp, at night lulled to sleep by the beating waters of the swift flowing stream, from which the town gets its name, and the rustling of the redwoods through which the stars looked down upon us.

The whistles were just shrilling the noon-hour when the "happy dozen" entered Santa Cruz. A full half-hour before we had caught a glimpse of the cobalt blue of the ocean we had heard the murmur of its waves. Presently we stood on the sandy beach, over which, in places, the hissing laps of sea ran like silver-edged tongues, and gazed far out where the sun tinted sails of the boats slanted and turned. The air came salt and sea-weedy to our nostrils, invigorating us and acting as a tonic, after the sweetening fragrance of the mountain breezes, laden with the odor of opening flowers.

"ON TO WATSONVILLE."

A day and a half flew by all too quickly. Hours were spent in wandering far down the beach, hunting for shells, fishing for sharks and whales, bathing in the surf, or going out boat riding. While out for a sail one afternoon, some of the boys saw what they took to be a girl dressed in white duck standing out on a point of land. Immediately their hats came off and were waved vigorously, but strange to relate, the young lady did not seem to heed them. Then the boatmen put the boat about and headed for the fair creature, the boys continuing their waving. At length the figure in white was hidden by a great rock, but this was rounded and there, looking down upon them was the creature of their admiration—a large, white post! On it was painted, "U. S. Reservation. Keep Off!" Then every one told every one else that he knew what it was all the time.

While in Santa Cruz we visited the famous wave motor, the light house and other points of interest.

Tuesday night when we started for Capitola, four miles distant, our party numbered but ten. The life had become to strenuous for one, and forsaking the camp-cooked meals, the balmy air and the beds from which we arose in the morning with our faces already washed by the dews, hied himself home on the train. The other one staid behind to attend a dance. What things love will do!

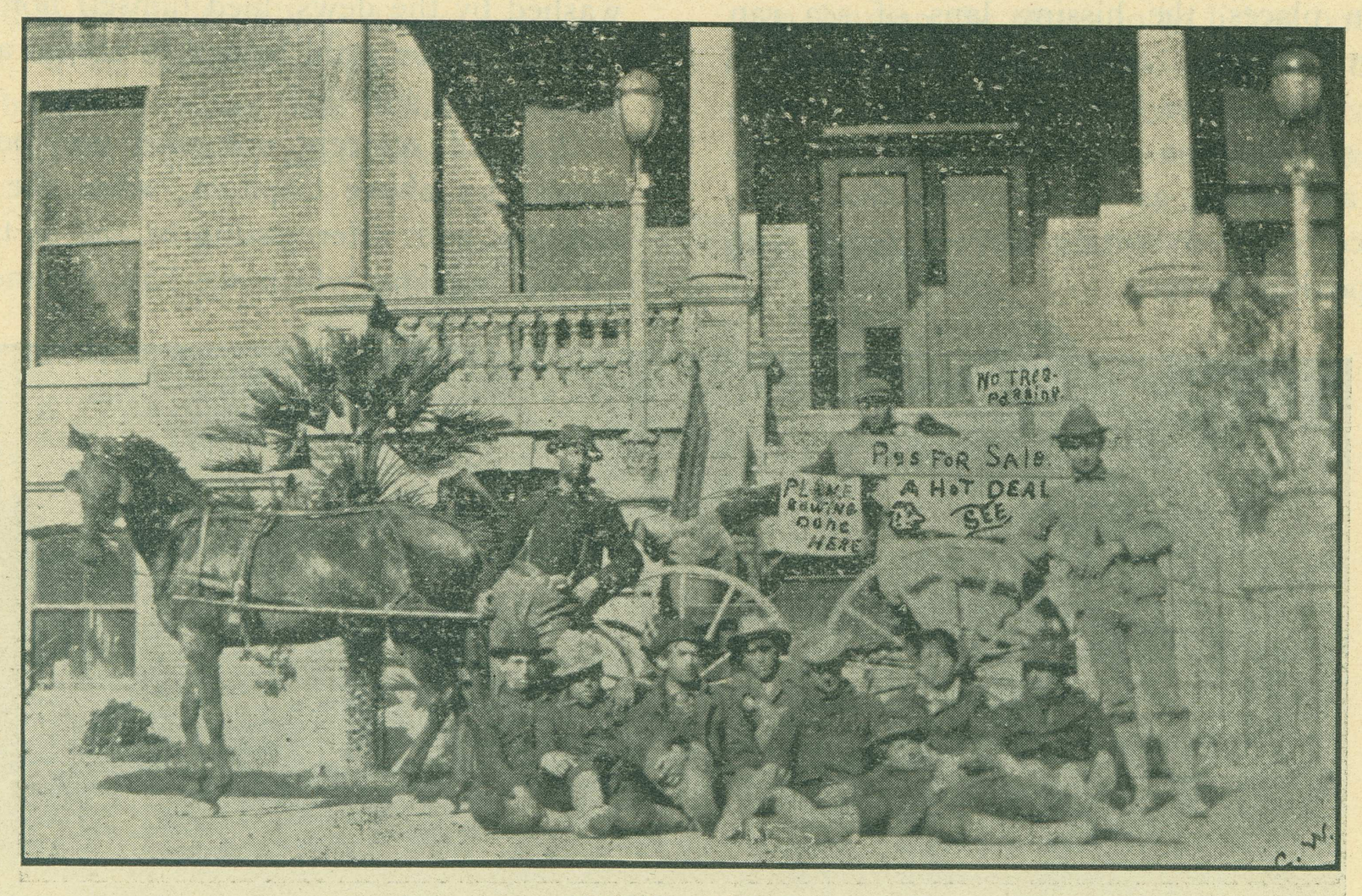
We had scarcely unloaded our belongings on a vacant lot above Capitola, when the poundmaster rode up, and, after gazing at one of the signs which we carried and which we had fastened up near by, said: "Say, you boys can't camp here. There's a sign there, 'No Trespassing Under Penalty of Law,' and I guess that means you."

"No it doesn't. It means you. We put it there for your special benefit. Goodbye," we replied. The poundmaster said no more.

"On to Watsonville," put us in motion the next afternoon after we had gathered from our rambles about the pretty little town and prettier beach. Now there were but eight of us, two more having fallen by the

wayside. The attraction which kept them an hour or so after we left was in the shape of two young ladies, but the boys managed to tear themselves away in time to catch up with us before we had reached our camping place, three miles out of Watsonville.

We spent but a short time in Watsonville, the following day hurrying on to the ranch of Mr. Rowe, brother-in-law of our manager, Robert Reid, five miles out, where a splendid dinner was waiting us. Here we were joined by the one who had remained in Santa Cruz, he coming in just in time to eat with the rest of us. No matter how widely separated, we always managed to be on hand when there was any eating to be done.



"HOME AGAIN."

Out on the lawn, under the shade of a tree, Mr. Rowe presided over a spread which was more than generous. Sandwiches of every description, rich cakes, salad, stuffed eggs, delicious frit, covered with whipped cream, "real" coffee—but what need to continue. And the way we fell upon that dinner! The first huge tray of sandwiches disappeared like a flake of snow under a July sun. The cake plates emptied only to be filled again, while our cups were constantly replenished by Mrs. Rowe, who insisted that we have "all we could eat."

After the dinner we went bathing in a creek near by, and then came down on the strawberry fields like a wolf on the fold. While one member of the party would hold the owner, always a Chinaman, in an interesting conversation about the weather and how far it was to the nearest town, the rest would make hay while the sun shone, or rather pick strawberries while the Celestial moaned. It was still rather early for strawberries, and it took considerable searching among the broad green leaves, but the ones we did find were large and sweet.

We were loath to leave this section, where so generous a host and hostess were; where the strawberries were to be had for the picking, but Thursday was at hand. It was threatening rain, and we still had over fifty miles of our journey to complete. At midnight came the cry, "On to Gilroy," and though the prospect of an eighteen mile hike by night was not exactly a cheerful one, we rolled out of our beds in Mr. Rowe's hay-mow and "folding our tents, stole away into the silent night," following the railroad track, leaving two of our number to bring the wagon around by the road next day. We started for Gilroy walking, but when we reached there at 2 a. m., we found ourselves in an empty freight car. We had walked three miles and ridden fifteen on the freight—but let us draw the curtain here.

Gilroy claimed us until about 4 o'clock Friday afternoon, when we started for Morgan Hill. We were now adepts at walking, and were striding along abreast, congratulating ourselves on our appearance, when suddenly we heard a scream and saw a pair of legs twinkling in a cloud of dust. The legs belonged to a little fellow who was running as if for his life, his face pale with fear, and yelling at every jump. Pres-

ently we caught what he was saying.

"Run, mommer, run. The Injuns is coming—the Injuns is coming. Run! Run!

A little later we swung into Morgan Hill, having done the last eight miles in an hour and three-quarters. The wagon had been left far behind. Soon we heard the sound of wheels, and looking up, saw a camping outfit coming.

One of the boys exclaimed, "Why, Vorheis has grown a bunch of whiskers since we left him."

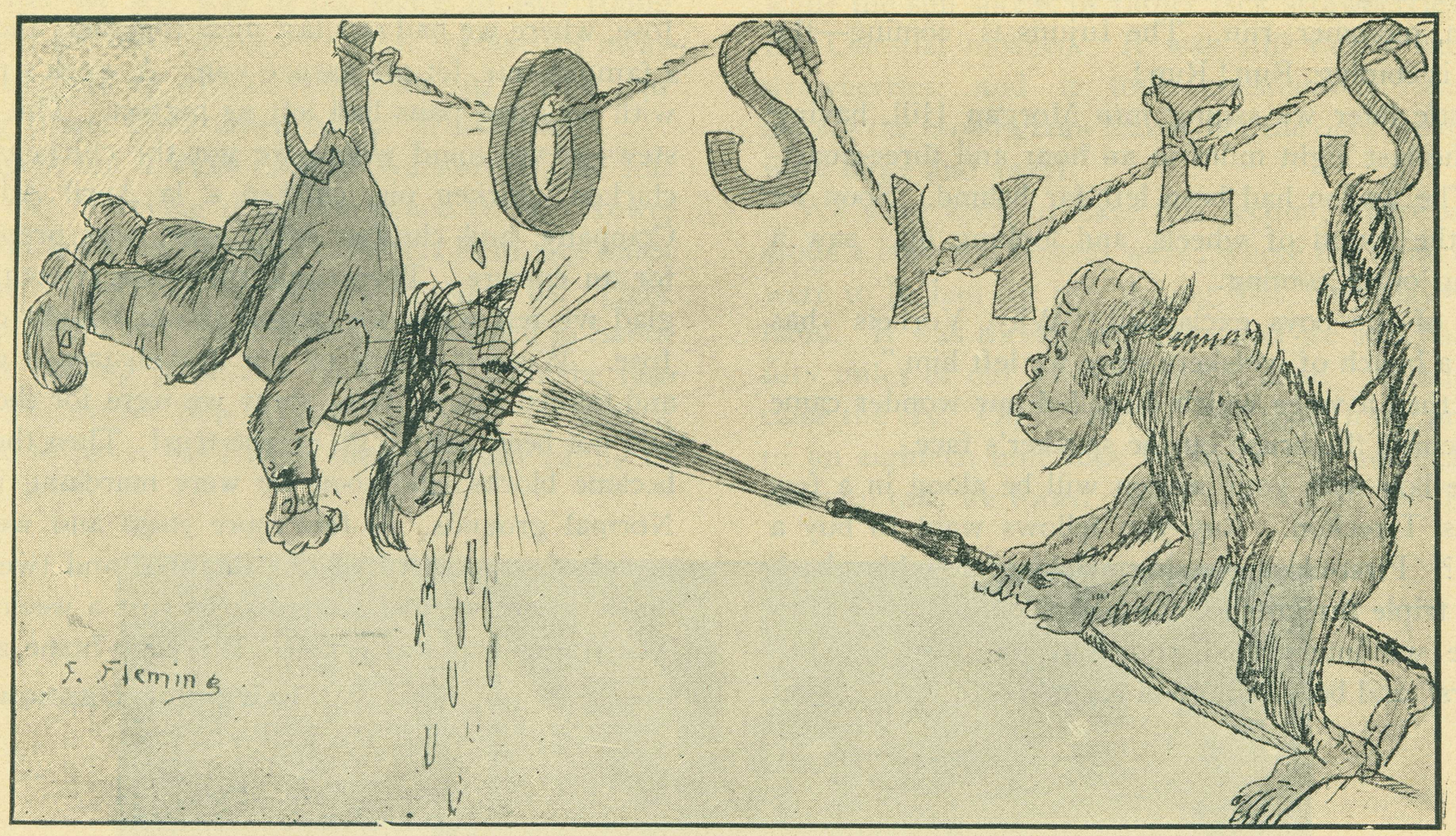
Just then a voice which dispelled our wonder came from behind the brush on the speaker's face.

"The boy with your wagon will be along in a few minutes, I reckon. Any you fellows want to buy a Singer? First-class sewing-machine, double back action, triple threaded, never wears out"—

Here we interrupted and told him we were all "singers" and bade him good night.

Saturday we tramped to within a few miles of San Jose, where we had our last meal together, and it was a famous one, let me assure you. A week's practice with pots and pans had left us perfect. The chicken stew—never mind where we got the chickens—fried chicken, chicken pie, chicken a la April Adventure Company, and chicken every way, was prepared fit for an epicure. Then came the home stretch. How glad we felt when we caught the first sight of San Jose. We felt proud of our travel-stained clothing and tanned skins. How sorry we were for those who had not been able to go on the trip! Then the miles became blocks, and soon we were marching into the Normal grounds. A few more steps and we stood, proud of our record of one hundred and twenty-five miles, where we had started from just a week before. The tramp trip was ended. We were home again.

LAWRENCE CHENOWETH.



RECORD MADE BY PHONOGRAPH AT JUNE CLASS MEETING.

H- - tt - - - l O - g - - d: Anyone who wants to give me any presents "kin."

N - ll - F - a - - - rs: This class has been noted for its originality ever since I've been in the school.

A - - x C t - t b - - - - on: I rise to a point of order.

C - yn G - - g - - y: You don't give everybody a brick.

H - p - P - b - - n: I want "Always filling, never full," because it is so suggestive.

L - v - - t F - - s - r: Let's have something swell.

M - m - e S - ll - v - -: Be gorra.

R - b - - t Re - - d: There are people from both sides who aren't here.

Cooney: How much money do you want for the president?

C - lyn Gregory: Be original or be——.

L—— F——: Let's all dress alike.

Prof. Dailey—Well, did you get the program made out for the country school?

Class—We declared a recess. We can work the recesses all right but we can't get in the recitations.

Prof. D.—It seems to me that Mr. King is the one who is being worked.

Since teaching Miss Beckington is getting to be very systematic. She has planned to take her children to the museum on the days the Normal teachers are coming to visit.

Abbie McK. (feeding a turtle dove wheat)—Why can't we eat wheat, too?

Little Boy—Because we'd have appendicitis.

Prof. Dailey—What is the object of the Normal School?

Edith B—— (after being in the Normal for four years)—I don't know. I haven't read the lesson.

Miss Jessen wants to know if married women can teach.

Love is so cheap with some people that they are always sending some to their friends—it is always convenient and appreciated—after a fashion. The habit may be a wholesome one, as Mr. Bullock might express it, but when the habit becomes unconscious it is time to remember our friends with something more substantial—if for nothing else but to break the habit. There is a certain young lady among the June graduates who wrote to a county superintendent the other day for some needed information, and this is the way she hurriedly closed her letter—"With ever so much love, I am, Yours, ———"

Reflections.

June Class '02, Passes Before the Mirror.

NAME	FOTO	FAD	FAME	FUTURE	QUOTATION
Jessie C. Armstrong	Frowning	Unknown	Having a husband	Teacher	Who findeth a husband findeth a good thing
Edith Bailey	Tiny	Her cousin	Writing poetry	English professor	"Yours without a struggle"
Laura Bailey	Motherly	Her children	Talking	Hello. girl	'Tis better to learn late than never
Leona Bayley	Lovable	Good times	Knowledge of winds	Weather prophet	"We put on our shirt waists and had a jolly time"
Mamie Baker	Wise	To be dignified	Collecting money	Matron	Quiet, just and unassuming
Olive Beckington	Precise	Escaping Teachers Visits	Helping others	Unknown	"Well, I don't know"
Lillian Biggs	Fuzzy	Boys	Making a hit	Singer	'Tis better to have loved and lost than not to have loved at all
Pearl Bohnett	Neat	"Cap"	Eating bananas	Actress	Alone with one fair star for company
Daisy Bowen	Friendly	Any old thing	Tragedy	Dramatic reader	Is she not passing fair?
Mamie Brown	A little lady	Long skirts	H. S. boys	Teacher	Her air, her manners, all who saw admired
Lella Cameron	Lively	Sappho Club	Getting lost	Teacher in Stockton	Why do you lead him a wild goose chase?
Martha Cooney	Troubled	Combination of Colors	Dancing parties	Prima Donna	Sing again with your dear voice
Gertrude Christman	Full Moon	None	Knowledge	Sage	The love of learning and all the sweet serenity of books
Annie Collins	Happy	Blushing	Nothing	Hades	The proof of the cake is the eating
Alex Cuthbertson	Pompous	Quiet girls	Inconstancy	Debater	To meet, to love, and then to part
Julia Dalton	Scowling	Bugs	Nature study	Home by the sea shore	Forbear to judge, we know her not
Edith Daniels	Dreamy	Shakesp'are	Elocution	Philosopher	Those rare blue eyes
Mabel Dassel	Pale	Graduating dress	Getting married	Teacher?	She knows her man
Lizzie Dienst	Good	Dewey	Knowledge	Psychology Prof.	Diligence is the mother of good fortune
Clara Donlon	Happy-go-lucky	Jokes	Walking	Love in a cottage	At last we have found perpetual motion
Mary Driscoll	Serious	Writing Applications	History note book	School trustee	Reasoning at every step she treads
Elma Fisher	Demure	Studying	Quietness	Matron	So much of earth, so much of Heaven
Nell Flanders	Smiling	Originality	Cake walking	Buggy riding	I am more original than my own originals
Clara Foy	Learned	Mistletoe	Reading notes	Spelling teacher	Rome was not built in a day
Lovett Fraser	Sleepy	Eating	Quizzing	Lawyer	The poor benighted Hindoo
Walter Frost	Cold	Spouting	Country dances	Socialist	If they could know the power of my eloquence'
Clara Glashoff	Rosy	Boys	Music	Hair dresser	Not too gay; not too sad; Not too good; not too bad
Vida Green	Dainty	Lunch baskets	Sewing	Tailoress	I would have peace and quietness.
Carolyn Gregory	Determined	Match making	Politician	Taking care of lost beaux	Man is a giddy thing, and that is my opinion
Myrtle Hall	Angelic	Getting in the last word	Her ambition	Stump speaker	A good name is rather to be chosen than great riches
Cordelia Hays	Solemn	Wrappers	Being late	Journalist	"I just love you in that suit"
Adeline Hedley	Worried	Physical culture	Growling	Dancing teacher	Be "Swift"
Nettie Hitchings	Self-conscious	Teaching Sewing	Bashfulness	Professor of concrete geometry	Her lily hand, her rosy cheek
Amy Hodges	Sweet Tempered	Bullock	Grammar	Agent	Heart on her lips; soul within her eyes
Agnes Hoey	Bricky	Carrying Books	Historian	Trained nurse	How marvelously bright
Zippa Holland	Spherical	Dressing in a hurry	Destroying precious documents	Minister's wife	Weakened and wasted to skin and bones
Clarence Hough	Jolly	Mistletoe	A second Moody	A fresh young man	Come boys let's go to the Y. M. C. A.
Fannie Humaston	Scared	Building air castles	Singing	Choir leader	A still, small voice
Christine Jessen	"Sassy"	Dancing	Appetite	Milliner	A happy bit
Georgie Johnston	"Pious"	Dancing	Staying up nights	Ballet dancer	Let the world slide
Rose Kelleher	Thoughtful	Jewelry	Telling stories	Book agent	So much to do, so little done
Avis King	Conceited	"Jimmy"	Bluffing	Carpenter	He putteth down one, and setteth up another
Edna Klumpp	Dignified	Joshes	Designer	Collector of Indian relics	"I'll be jiggered"
Winifred Lee	Interesting	Giving Dancing Lessons	Literature	Bookkeeper	Thou hast no sorrow in thy song, No winter in thy year
Emma Loofbourrow	Frenchy	Middle aged men	Giggling	Stepmother	Her air had a meaning, her movement a grace
Ethel Main	Dreamy	Lodge pins	Chaperoning	Doctor	You would make a better smiler than teacher
Elizabeth Marcus	Quiet	Good times	Goodness	Nurse	"Always so busy, simply rushed"
Lizzie McKiernan	Pleasing	Riding horseback	"Pomes"	Sonnetteer	Go boldly forth my little lay
Bertha McWilliams	Childlike	Mines	Librarian	Hotel proprietor	Sweet, childish ways
Aimee Meachen	Frightened	Miss Howe	Acting	A. B.	Rich in common sense
Gertrude Meads	Innocent	Novels	Grace	Stenographer	Some novel power sprang up
Mamie Menihan	Haughty	Collecting bottles	Wishing a home of her own	Having a home of her own	O, why should the spirit of mortal be proud
Lurena Merriman	Serious	Manual training	Beautiful hands	Palmist	I would not, if I could, be gay
Lillie Muscio	Modest	Lisping	Her name	Collector	What's in a name?
Hattibel Osgood	Slim	"Hat"—ee	Sarcasm	10, 20, 30c Comedian	With all her faults, I love her still
Della Pare	Dull	Capitola	Cooking	Missionary	She sat like patience on a monument

NAME	FOTO	FAD	FAME	FUTURE	QUOTATION
Emma Patchett	Japanned	Japan	Lecturer on Japan	Missionary in Japan	"When I was in Japan"
Carrie Pfau	Genial	To get her lessons	Poetry	Poet Laureate	I know it is a sin for me to sit and grin
Clara Pierce	Learned	School	Cooking	Nurse	Little said, is soonest mended
Florence Porter	Large	Manual training	Lady Macbeth	Fortune teller	Even a single hair casts its shadow
Helen Protzman	Intellectual	Y. M. C. A.	Memorizing	Missionary	"You are the cream of the Normal",
Edna Raum	Teacherified	Studying	Teaching	Teacher	{ Two lovely berries moulded on one stem.
Maude Talbott	Stubby	Studying	Literature	Teacher	
Bertha Reid	Improving	Her brother	Helping others	Paris	"It just makes me sick"
Robert Reid	Business-like	Roberts' Rules of Order	Farmer	King of Cannibal Islands	I am monarch of all I survey
Linnie Rhyne	Meek	Posters	Writing	Spiritualist	So near and yet so far
Nellie Rinehart	Sedate	Being on time	Negro paper	Traveler	Exceedingly well read
Ethel Scott	Stubborn	Belts	Keeping house	Bachelor maid	The secret of success is constancy to purpose
Henrietta Smith	"Swell"	Floppy hats	Pompadour	Base ball coach	A good time coming
Mary Sullivan	Plain Irish	Library	Candied(?) speeches	Brohaskas' advance agent	Don't put too fine a point to your wit, for fear it might get blunted
Ora Trott	Important	Art Club	Nothing	Old maid	What is so rare as a day in June?
Kate Welch	Striking	Sarsaparilla	Promenading	Old maid	Her hair was tawny with gold
Grace Widemann	Sad	Agnes	Half hour for U. S. history	Fortune teller	Let us be of good cheer
Eva Wilber	Chunky	Bloomers	Making candy	Getting married	Be good and you will be happy
Elsie Wiley	Kind	Battenburg	Playing marches	?	"I'm just tired out, I've worked so hard"
Hope Pyburn	Talkative	Talking	Talking	Talker	She is a talker and needs no questioning before she speaks
Adah Williams	Self-satisfied	Blankets	Debating	A school of one	Winning, generous, loving, bright
Clarence Wilson	Pretty	Writing notes	Exchanging hampers	Mechanic	How can I leave thee!
Bessie Williams	A little armful	Traveling	Jolly disposition	Society belle	Not too small for character; Not too tall to flirt
Henrietta Wolford	Microscopic	Sleeping	Absolutely none	Hades	Have a good time while you're living; you're a long time dead
Ethel Wood	Shy	Answering invitations	Penmanship	Athlete	Goodness does not consist in greatness, but greatness in goodness
Elora Yancy	Tired	Tan	Coaching	Cashier	The bravest are the tenderest, The loving are the daring.

It looks rather suspicious when E. G., one of our former graduates, writes to Lottie S. for suggestions as to what kind of a door to have for a house.

The Senior class wishes to know how Miss Baker reached home Tuesday night.

As summer is coming on Mr. Htewonehc would like to know the whereabouts of his white vest.

While in Santa Cruz in vacation the Normal boys demoralized the school. It is reported that one of them actually embraced the teacher.

Wanted to know: Why Gertrude W—— likes Normal boys better than those in the High School.

Ask R—na D-ly why she likes to study the use of "shall" and "will." Perhaps she is debating as to which is the proper answer.

Henrietta W.—I should hate to be an attendant out at an asylum, for fear I should go crazy myself.

Old Man (seriously)—Well, weak-minded people are liable to.

How did T——p P—— know how heavy R. D. is?

Miss Kinney—Mr. Fox, spell "maid," meaning a young lady.

Mr. Fox (boldly)—M-a-d-e.

Do you know that Prof. Rattan became so interested reading the May Pennant that he forgot to go to his class?

Miss Holland has a new occupation—entertaining her girl-friends' beaux.

How did it happen that C—— R—— and L—— C—— got lost coming home from Pearl B's?

Mr. Carter came into class late without a book. Miss Howe asked a question and he failed to answer it.

Miss Howe (impatiently)—It seems to me, Mr. Carter, if you carried a book around with you, you might absorb some of it.

Fox (after talking to Mary H.)—She wouldn't take the heart.

Mr. Dailey (in School Economics)—Now, Mr. Cuthbertson, supposing that you had twenty-seven girls one month and twenty-eight girls another——

Mr. Cuthbertson—Yes.

Prof. A. to W. Rice, in Con. Geom.—Perhaps you started full.

Who knows?

Things begin to look interesting when you have a class-meeting, a critic meeting in Room 11, another in Room P, and have to be at the dressmaker's, all at 3:15.

Student in History—Why, was the first president not inaugurated on March 4th?

Miss Howe—Wouldn't do to have the show without the monkey, would it? He wasn't there.

As a Child Saw Them:

One of the students brought her nephew to the chapel exercises one morning—he had been told before by his aunt that it would be as good as a circus. During the exercises the little fellow pointed toward the rostrum and lisped, "Is tat d' side-show?"

The Editors would like to know what all the josh is on Miss Nicholson.

Prof. Dailey (after election)—This is a very cold morning to be talking ice cream, but Mr. Bennett has a few words to say on the subject.

Prof. Bennett—I wonder why Mr. Dailey feels so cold this morning.

Little Girl to H. W. (with a new dress on)—O, Miss W——, you just look beautiful today.

Miss W——.—Don't I always look beautiful?

L. G.—Well, everybody has a right to his own opinion.

Prof. D.—Supposing no more fresh air could get into the room and the shortest person could get the most air, who would live the longest?

Bessie W.—I would.

Ethel W—— received an invitation to a musicale but it came late. "Girls, it took me an hour and a half to answer that note." A laugh from the girls brought this reply, "Well, if it was to some one that I didn't care for"—Laughter.

Mr. K. in Physical Geog. to Prof. Holway—Can't we have a half-holiday to churn all that cream we have?

Grace, did your hand get burned?

At Smith's Creek:

Girls in one carryall—Where's Miss Cory?

Girls in another carryall—Where's Mr. Bennett?

Draw your own conclusions.

What is the reason Alva L—— studies history in Room K the sixth hour?

Perhaps Stanley H—— can tell. He comes over from H. S. the sixth hour for drawing.

Clara D. (in School Economics)—They allow $20 apiece for all children over seventy

---

For several days numerous letters addressed to Sigma Theta Chi were received at a certain house on Second street. This unusual address greatly excited the postman who, upon giving the letters to a member of the house, remarked, "Say, that new cook of yours has a queer name."

Ask Lovett Fraser if he appreciates Las Amigas ice cream.

I wonder how Cap. Ornbaun likes to swing the rings.

The Promise of Ivy.

Snng by June Class, '02, on "Ivy Day."

TUNE—*Gaudaemus.*

Close we plant the ivy green
Here against the rugged wall,
May it grow a clustering screen—
Creeping, wandering over all.
See how lightly heaves the soil!
How the blade doth glitter!
Could there be a merrier toil
Or Ivy-day be fitter?

Creep, oh creep, small sturdy stem!
And let the deathless leaves of thee
Line each window with a hem
Of clambering, green luxuriancy.
Cover all these barren walls,
Lend thy aid to hallowed grace,
Throw thy halo round these halls,
Soften, cheer this dear old place.

Clinging firmly to the earth
Waving now thy slender leaves,
Dost thou know what joy and mirth
In eighty hearts this moment heaves?
Thou wilt high and higher grow
Covering all this weathered wall
Loved the more through weal and woe
When o'er it thy swung grace shall fall.

E. C. B.

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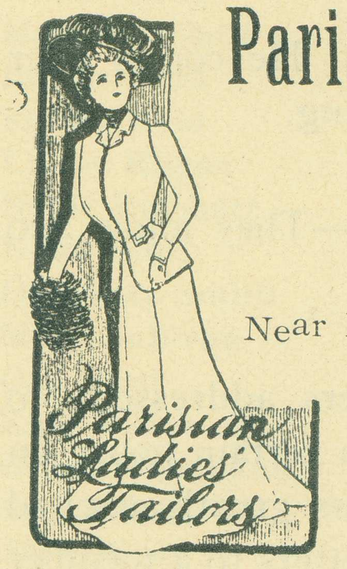

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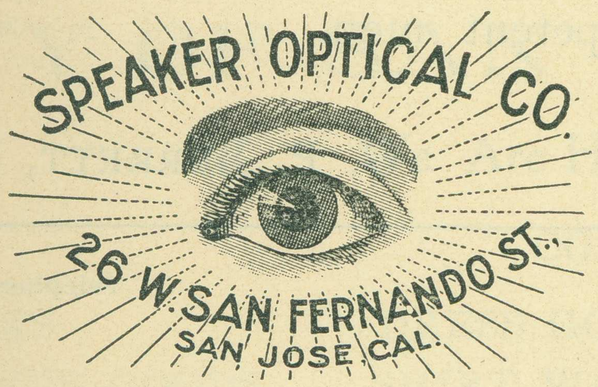

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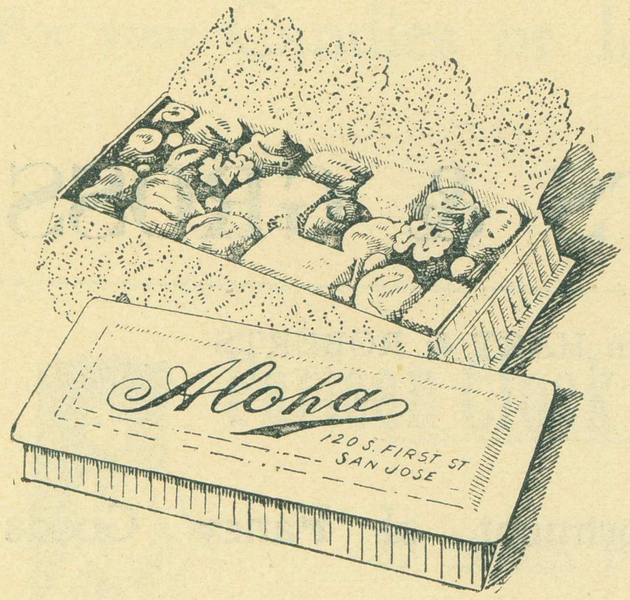

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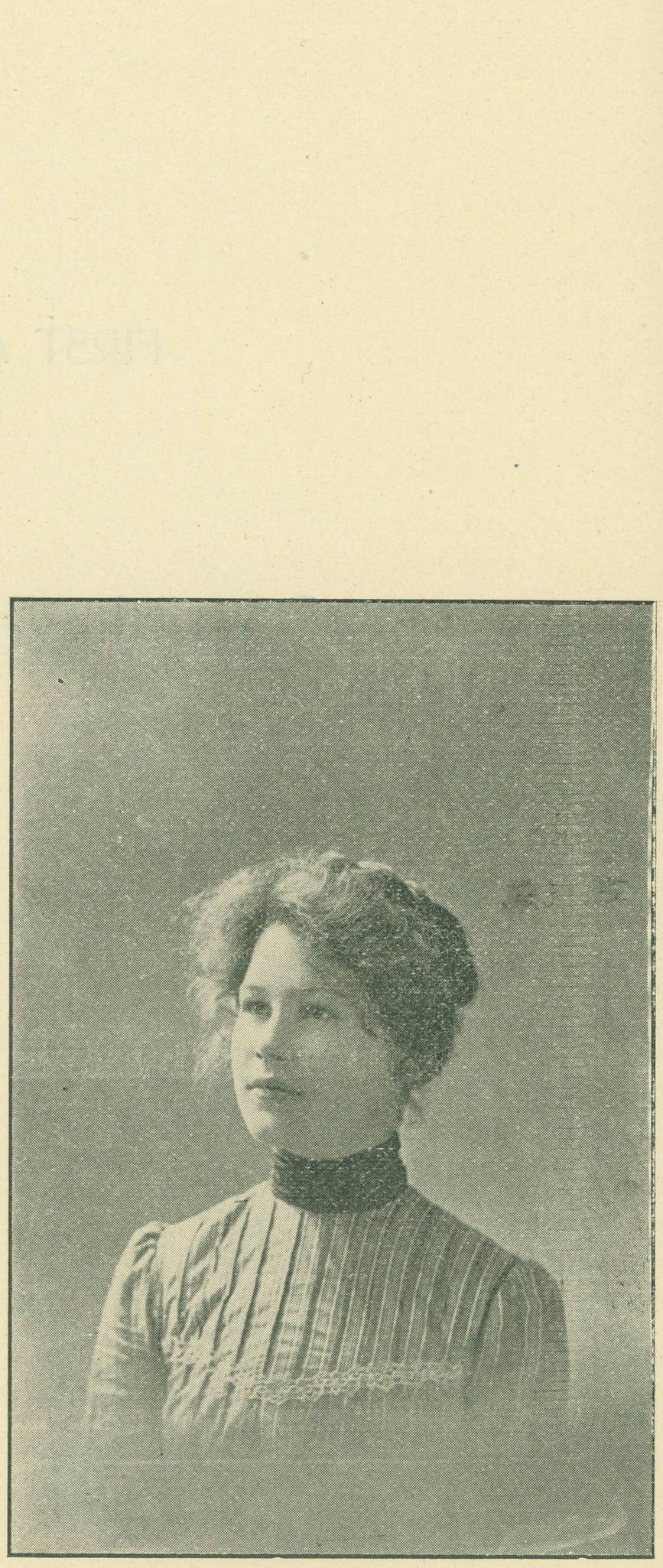
FIRST ANNUAL REPORT

OF THE

San Jose Normal Club

June. 1902.

PEARL BOHNETT
President Student Bady.



CLARA DONLON
Secretary Normal Club.

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First Annual Report of the San Jose Normal Club.

Officers for the Year 1901-1902.

HENRY MEADE BLAND, A.M., Ph. D., Prof. Education State Normal School, President.

D. T. BATEMAN, Principal Horace Mann School, Vice-President.

CLARA DONLON AND GENEVEIVE NICHOLSON, Secretaries.

Committee on Nature Club Leaflets.

EDNA KLUMPP, EVA WILBUR, LILLIAN BIGGS, of tho June Class, 1902.

Committee on Course of Study.

L. B. WILSON, Prof. of Physics San Jose Normal School, Chairman.
J. E. HANCOCK, Principal Grant Grammar.
E. E. BROWNELL, President County Board of Education.
MRS. LUELLA SMITH, Teacher Longfellow School.
F. K. BARTHEL, President Normal Alumni Association.
STELLA M. HERNDON, Teacher Normal Training School.
PEARL BOHNETT, Senior Class, 1902.

Committee on Field Work.

D. T. BATEMAN, Principal Horace Mann School, Chairman.
MARY SULLIVAN
MATTIE FEELEY
MAUDE WELCH
IDA LOVE
MARY KOERBER
NELLIE O'BRIEN
MINNIE ROHERBACK
} Teachers City of San Jose.
STELLA M. HERNDON, Normal Training School.
MRS. S. B. OLINDER, Principal East San Jose School.

TO THE OFEICERS AND MEMBERS OF THE SAN JOSE NORMAL CLUB.

The first annual report of the Normal Club is hereby presented for your consideration. The contents of this report bear almost entirely upon Nature Study; and all lectures, Committee reports on Courses of Study, all leaflets have been printed in full, together with a short history of the club and a brief statement of its ideals. The papers presented constitute by far the most exhaustive statement of the subject matter of nature work and its method of treatment in the public school yet presented to our teachers.

Respectfully Submitted,

HENRY MEADE BLAND,
President.

CLARA DONLON,
Secretary.

HISTORY OF THE CLUB.

Plans for the Normal Club were first projected by the Senior Class of the State Normal School at San Jose which graduated in June, 1901. In November, 1900, at a general meeting of this class, at which ninety-three Seniors were present, Miss Sadie Holmes being chairman of the meeting, committee of Seniors, consisting of Sadie Holmes, Elsie Ruhl, Leonard Stevens, Helen Mignon, Maud Mariner and Alex. Sherriffs, was appointed to confer with a committee from the Normal School Faculty, and a committee from the Normal Alumni Association, to formulate plans for the Club.

The joint committee consisted of the Seniors aforementioned and A. E. Shumate, Principal of the High School, Prof. R. S. Holway, Dr. M. E. Dailey, Dr.

H. M. Bland, Mrs. Mary W. George. The Senior Committee met on November 7, 1900, with representatives of the Faculty and Alumni and adopted the following plans in a report:

First.—That a pedagogical club be organized.

Second.—That its name was to be "The Normal Club."

Third.—That its membership extend to the Faculty of the Normal, the Alumni of the Normal, all teachers of the city and county, and all students within one year of graduation.

Fourth.—That its officers consist of a President, Vice-President and Secretary. The said officers to also consist the Executive Committee of the Club

Fifth.—That standing committees be appointed to report from time to time upon the following subjects:

Course of Study.

Current Educational Literature.

Manual Training and Nature Study.

Pedagogy and Psychology and Kindergarten.

Sixth.—That its meetings be held on Wednesday afternoon, every fourth week.

Seventh.—That its officers be elected annually the third week in September of each year.

The officers for the first year were as follows: Mrs. Mary W. George, President; Prof. A. E. Shumate, Vice-President; Elsie Ruhl, Secretary.

The constitution of the Club is as follows:

PREAMBLE.

Whereas, The increased interest in education is constantly calling for more careful consideration and discussion of all topics relating thereto, we, the undersigned, in order to keep pace with the times in these matters, do organize ourselves into an Association to be governed by the following:

CONSTITUTION.

Article I.—Title.

The name and title of this Association shall be "The Normal Club."

Article II.—Object.

The object of the Normal Club is to insure an increasing interest in education.

Article III.—Officers.

The officers of the Normal Club shall be a President, a Vice-President and a Secretary, the said officers to also constitute the Executive Committee of the Association.

Article IV.—Members.

Any person of the Normal School Faculty and Alumni Association of the San Jose Normal School; any person of the said school who is within one year of graduation; or any person who is engaged in the teaching profession in either the city of San Jose or county of Santa Clara, may become a member of this Association.

Article V.—Meetings.

The meetings of the Normal Club shall be held Wednesday afternoon of every fourth week of the calendar month, in the Assembly Hall of the Normal.

Article VI.—Committees.

There shall be standing committees appointed by the President which shall report, from time to time, upon the following subjects:

Courses of Study.

Current Educational Literature.

Manual Training and Nature Study.

Pedagogy and Psychology and Kindergarten.

Article VII.—Dues.

There shall be no dues.

Article VIII.—Duty of the President.

It shall be the duty of the President to preside at all meetings, appoint committees, and perform all other duties usually required of such an officer.

Article IX.—Duties of the Vice-President.

It shall be the duty of the Vice-President, when the President is absent, to preside at meetings and to perform any other duties of the President.

Article X.—Duty of the Secretary.

It shall be the duty of the Secretary to keep an impartial account of all the proceedings of the Association and Executive Committee; conduct the correspondence for the Association, and perform all other duties required of such an officer.

Article XI.—Duty of Executive Committee.

Section 1. It shall be the duty of the Executive Committee to manage, control and dispose of the affairs of the Association, and to fill for the unexpired term any vacancies that may occur in any of the offices of the Association.

Sec. 2. The Executive Committee shall hold meetings at least once a month for the transaction of business, and at such meetings two members shall constitute a quorum.

ARTICLE XII.—AMENDMENTS.

This Constitution may be altered by a two-thirds vote of all the members present at any regular meeting, provided that such amendment has been proposed at a previous regular meeting and entered on the minutes, together with the name of the member proposing it.

BY-LAWS.

ARTICLE I.—HOURS OF MEETING.

The hours for assembling for the stated meetings of the Normal Club shall be from 3:30 p. m. to 5. p. m.

ARTICLE II.—ELECTION OF OFFICERS.

The election of officers shall take place annually, the third week in September of each year by ballot.

ARTICLE III.—ADMISSION OF MEMBERS.

The names of all persons desiring admission to the Normal Club shall be presented to the Secretary, who shall bring the same before the members of the Association for election at any regular meeting.

ARTICLE IV.

"Roberts Rules of Order" shall apply in the government of the Club in all cases not covered by the above Constitution and By-Laws.

The Sessions of the Normal Club for the year 1900 and 1901 were held regularly every third Wednesday of the month. The meetings were largely attended, especially by teachers, and the discussion attracted an interest all over the State. The general theme discussed at these meetings was "Practical Education." The local San Jose papers took up the discussion of the Club topics with a result that more than usual interest was evinced by the public. The editorials of Mr. Alfred Holman, of the San Jose Mercury, and Senator Chas. M. Shortridge, of the San Jose Herald, were able, and attracted much attention from school men.

Among the speakers from abroad who addressed the Club in this, the first year of its existence, were Mr. H. H. Weinstock, Miss Margaret Shallenberger and Mr. John McNaught, the latter two from San Francisco.

The Club began its sessions for the year 1901-2 on October, 30, 1901. At this meeting Dr. H. M. Bland was unanimously elected President, Prof. D. T. Bateman, Vice-President, and Miss Genevieve Nicholson, of the Normal School Senior Class, Secretary. On November 8th, 1901, Prof. C. W. Woodworth lectured to the Club on Nature Study. A lively discussion on the aims of the subject followed, participated in by Professors Bateman, Burnett, Rattan and Supt. F. P. Russell.

The policy of the Club for the year was now rapidly developed. It was decided to take up a series of discussions upon Nature Study. A series of leaflets, printed in full in this report, was begun, and a committee of Seniors appointed to publish and distribute the series. The prominent features of the Club meetings following were lectures by Porfessors Rattan, Wilson, Holway, of the Normal School, and Professor E. E. Brownell, of the San Jose High Schools. A Committee on Field Work in Nature Study held a number of meetings and successfully carried out a day in general field work at Alum Rock on the third of May, 1902. Horticultural Commissioner E. M. Ehrhorn, Professors Brownell and Holway and Principal Bateman led lectures at the Alum Rock outing, and contributed largely to the results obtained. About ninety teachers peered into the points of natural interest in Alum Rock Park and came home with many suggestions valuable for schoolroom work.

At the March meeting of the Club Miss Nicholson, the Secretary of the Club, resigned, she having been elected to a fine position in the public schools of Kern county. Miss Clara Donlon, temporary President of the June Class of 1902, of the Normal School, was unanimously elected to succeed Miss Nicholson as Secretary.

At the last regular meeting of the year interesting papers were read by President Dr. M. E. Dailey, of the Normal School, Professor A. E. Shumate, President of the California Teachers' Association, and Miss Anna Nicholson, teacher of English, San Jose Normal School.

The Club at its various sessions has been charmingly entertained by vocal solos from Professor B. M. Michell and Miss Elizabeth Blasdel.

Report of the Committee on Nature Study Field Work.

MR. PRESIDENT: The Field Committee appointed by you at the last meeting of this Club and consisting of a teacher from each school district of the city of San Jose, the Normal School and East San Jose, has held two interesting and profitable meetings. Our first meeting was at the County Board of Education rooms in the Courthouse, Mr. Bateman presiding, and most of the members of the committee present. There

were also present Pof. Rattan, county entomologist E. M. Ehrhorn, both of whom submitted valuable suggestions and interesting talks.

The purpose of the committee was to determine, if possible, the advisability of having field excursions by the teachers of this city, under competent leadership, for the purpose of furthering, if possible, the matter of nature study in out public schools, the object being to gather and study specimens of animals, plants and minerals, and to become as familiar with them as possible.

After listening to valuable and learned talks on the value of field lessons from Prof. Rattan and Entomologist Ehrhorn and other members of the committee, it was the unanimous voice of the committee that field lessons should be held as often as possible—that that was the most scientific method of getting at the matter—that the way to study nature is to go out where it may be found in great abundance. It was the unanimous voice of your committee that it would be advisable to hold our first out-door meeting at Alum Rock as soon as the weather and circumstances will permit.

Mr. Ehrhorn made the happy suggestion that it would be both pleasant and profitable to take an early car and lunch at Alum Rock Park, where an abundance of animal, vegetable and mineral may be lound, divide under leaderships, go out into the field for an hour or two, gather all sorts of specimens, desirable and undesirable, and return to camp about 12 m. for lunch, after which the specimens can be carefully examined, laceled and packed for the return trip. At this lunch gathering, or round table, it will be the duty and the pleasure of the leaders, who will probably be Professor Rattan and Entomologist Ehrhorn, to tell all they know, and some things they don't know, about the several specimens gathered, when notes will be made and the material prepared and packed for further use.

Your committee seemed to think that this thought was just right, and adopted it as the sentiment of the committee.

But what shall we do in the meantime, while the rains are falling and the sky is clearing? This field business is too important to wait for a single moment for good weather to go to Alum Rock Park on a grand day's outing.

Prof. Bland, who is always resourceful, suggested that when the committee adjourns it adjourn to meet at Prof Rattan's laboratory, the 20th, at 3:30, to which meeting all teachers were to be earnestly invited to attend, and bring with them any specimen animal or vegetable for identification.

About thirty teachers attended that meeting, which was a notable one. The Club was again favored with the presence of Mr. Ehrhorn, who imparted some very valuable information. His talks are always interesting, but at this meeting they were even more so than usual, as all present came prepared to discuss and ask questions on various subjects.

The usual strain of a nature study meeting seemed removed, and all entered into the spirit of investigation with zeal and earnestness.

Most of the teachers submitted specimens, which were examined by our competent leaders. But one specimen that had been spoken of faild to materialize, namely, the "old fossil." Perhaps it is still in reserve.

A bottle containing a specimen of a centipede and ground locust was passed among the members.

Mr. Ehrhorn explained that the centipede was poisonous to some people. This was due to the condition of the blood, as in the case of poison oak, and to the poison in the feet of the centipede.

The centipede is very fond of vegetable matter, especially of young seed.

A number of the teachers were anxious to know if th locust and centipede would prove friendly neighbors. This gave rise to discussion, and an observation lesson was the result. Prof. Rattan was the first to discover that the locust came out victorious in a duel that was fought to the death.

A leaf showing animal and vegetable life combined was next examined. The gall in stinging a leaf lays ar egg. This produces the ichneumon fly, which is beneficial, as it kills the larva of many different kinds of insects. Galls are of many different and beautiful colors.

Prof. Bland exhibited a specimen which was left to be examined by Prof. Rattan, who was to determine whether it was sweet fennel, anise or dill.

It is commonly called lady's chewing tobacco, and is very attractive to the California butterfly and other insects.

Prof. Bland made two very valuable suggestions, namely: That sweet anise be planted in every school yard in the city, and that the elderberry tree, one remarkably attractive to birds, be planted about the streets and in the school yard.

Mrs. Olinder's specimen created much interest. The hollow stem of the Loganberry bush being filled with the larvae of the industrious carpenter bee. The bee makes a small opening in the stem and descends a

short distance through the hollow portion of the stem. It then builds a cell and deposits therein food, namely, an insect. The egg is then placed in the cell and when hatched feeds upon the food.

This, however, does not destroy the roots, as the plant lives from one to two years after being infected.

Prof. Rattan gave an interesting talk on the buckeye, showing the seedling and how the smooth stalk comes out first, and how the bud is pushed into the ground by the stem, which sometimes grow twelve inches long. The buckeye may be grated as the potato was to obtain starch.

We were urged to start potatoes now, cutting them into halves, quarters, etc. He also spoke of the careless housewife who throws her potato parings into the yard and reaps a plentiful crop of potatoes.

Plants which grow by the wayside were examined and some interesting facts were gained from them.

Prof. Rattan gave quite a poetic discussion on the beautiful garbs of the elm tree for the various seasons of the year.

Miss Herndon very generously loaned a bunch of violets to Prof. Rattan, the discussion of which added to the interest of the meeting.

I would suggest that the teachers be privileged to bring specimens for identification to any and all meetings.

Some of the teachers expressed themselves to the effect that that was one of the most profitable meetings they had ever attended. And, indeed, such it might have been to everyone who had the interest to go out, gather specimens, submit them to a specialist and think a minute.

Signed: D. T. BATEMAN, Chairman.
MATTIE FEELEY, Secretary.

Extracts from Professor Volney Rattan's Nature Study Talks.

I said something once before about definitions, and their unsatisfactory effect upon us, but before going on I want to speak further of definitions, because I want to use some. Herbert Spencer's definition of evolution is: "Evolution is change from an indefinite, incoherent homogeneity to a definite, coherent, heterogeneity, through a succession of integrations and differentiations." Who on first reading it could make it out? I worked over it an hour and gave it up. Such a definition is of no use whatever.

But I want to begin this talk with some definitions of nature study, because you have been reading up, and have found some difficulties with the definitions you have come across. Now, that we have read, we will try to formulate a definition of our own. Bailey's definition of nature study is, "Seeing things which one looks at, and the drawing of proper conclusions from what one sees." Hodge, of Clark University, not only criticizes Bailey's definition, but criticizes all nature study leaflets issued from Cornell. He says that Bailey's method is picking up whatever you come to at first, no matter what it is, then taking hold of it and studying it. He criticizes a leaflet concerning a squash seed, says a squash seed knows all about germinating, says that the only thing practical about the leaflet is that it strengthens the child's mental powers to understand it. Squash seeds know all about germinating; horses know all about how to pull loads, without teaching the conditions under which the seed grows and the horse pulls.

But the fact that a squash seed knows how to germinate is no reason why we should not also learn something about it. If we do not know something about how to plant squash seeds, we need not expect to raise the best squashes. If I had known what Bailey's leaflet tells when I was a boy, I should have known better than I did how to plant squashes. We used to plant on sod, the grassy side turned under. Prairie-breaking was turning over the sod. This was done in March, the sod began at once to rot, and in June some things could be planted in it. We planted squash seeds in the cracks between the sods. I planted them because I did not have to stoop so much as my father to reach the cracks. I had a stick to push them into the holes. This planting seeds in the cracks was the very worst way. They came up with cotyledons close together, and they had to rot off before the plant could grow. I discovered to my cost that the seeds were half rotten and the field had to be planted again. So I do not appreciate Hodge's criticism.

Dewey has a particularly good idea of education, but I do not know that he has written a definition of nature study. I think highly of him if he has not. One ought not to waste time in that way. His view is that the child's attitude toward nature is something like that of his far back ancestors. It is a good plan to let the child work out his tendencies something as did his ancestors. For example, because the child likes to hunt and kill things, he should be allowed to do it, and helped in it. I do not think Dewey would lead children through all these stages, but he would have

the child learn to do some of the things that our ancestors did, but which we do not have to do now. He must use bow and arrows, the distaff and a crude sort of loom, make it and work it as did our grandmothers. Hodge ridicules this. Nevertheless whenever it is done a great deal of good comes out of it, whether we call it nature study or nature.

Nature study is learning those things best worth doing, and doing those things that make life best worth living. This is what we expect the child to do in all his education. But just what do we expect children to do in school under the head of nature study? We do not expect them to do work of a different kind from that which they do when they grow up, and some that their ancestors did, and Dewey's way of working corresponds with the child nature. Hodge should not be so ready to criticize his fellow workers. He himself is open to criticism. We should enjoy Prof. Bailey's criticism of Hodge; they would be interesting, but not so very instructive.

Nature study is the observation of the most obvious facts in natural history. Nature study is elementary science, the way to get at it. What I want to impress is not definitions—they are the leakiest things, let everything through, and leave only the sieve. There are definitions of science that seem to amount to nothing. They are like the holes which swallows make in clay banks. They are worth something only because of what surrounds them. Definitions are worth something only because of what they carry with them. Huxley's definition of science is, "Science is organized common sense." In general, we will say that common sense is what we get through our senses. Huxley says science is organized common sense. When we organize what we get, classify it, put it into some shape—that is science.

In this study of elementary science we are trying to help the child get hold of this elementary knowledge which they will have later to deal with. We help them in this way: when out of doors, tired of playing, they look about to see if there is anything worth looking at, worth hearing, anything that tastes good, or that smells good. They find out how things look, what sort of sounds they make, how they taste and smell. That is observation. Observation is using all the senses in a careful way, not the eyes only. We are thinking about what this sound means; about what this feeling means. It means more than the thing is small. We think about what this taste means, of what value it is that the thing should be sweet. Children like to think. But do not carry elementary science too far; only help them to think about what they hear and taste and see and smell. Encourage them to use all their senses. They are generally discouraged, advised not to handle, not to talk, to be seen, not heard. Now we want to try to make the people see that there is something wrong in this. Let the children do what they want to do. There is no harm in tasting things, if they know how to taste it, though it is not well always to let them be tasting things at home in the pantry. But mamma is to blame if there is anything harmful in the pantry. They will use all their senses anyway. Let them try a thing with the tip of the tongue if it does not have smell. They find out how it tastes, the tip of the tongue is enough for this. But some things pleasant to the taste are poisonous, therefore do not eat till you find out. A baby looking at the fire might plunge into the bright thing. We must help the children, but do not do it all under the head of "don't, don't, don't." There is too much prohibiting, and not enough of direction as to what things to do and how to do them.

The teacher's work in nature study, then, is to help the pupil to organize his senses so that they may work well together. The senses trained together is observation. They may use them in discovering facts. They need help in this, for example, if the child is placed in a library, he will not get much unless he is helped. Browning's idea of turning a child loose in a library will not work. Turn a child loose in the world, or better, in a garden—he will pull off the flowers, dig up the roots, trample over the beds, do lots of harm, and not be gaining anything himself. Children must be under control. They must be taught to turn the pages of nature's book with care as they would turn the pages of any other book.

Nature study is on the whole an out-of-door study; out of school study. We should not plan for very much to be done in the schoolroom. Give simple directions in school, and take advantage of going out with the children as often as possible. But with one or two you will get better results than when many go together. We have all heard the old adage: "One boy is a boy, two boys are half a boy, and three boys are no boy at all." If you send a lot to the hills together they will not study much, they will interefere with each other's work. There are probably a few people who can do better work in connection with others.

It is important to get as much of this work as possible in under the head of studies. A good deal of outside work comes under the head of geography.

When they tell what they have found out they are exercising themselves in English, or when they write what they have found out. They are using another language if they draw to show which way a river runs, or make a map of the grounds, for drawing is a means of expression. The work we want to do will correlate with other school work, even in arithmetic. They can work out problems like this: How long will it take a stream to wash away so much earth, basing calculations upon our experiments. Or, how much bigger is an ostrich's egg than a hen's egg; or a hen's egg than the egg of the smallest bird we know? Here correlate with geometry. Some will say twice as big, others say four times as big, only a few will say eight times. Thinking in this way they will begin to have respect for big men. The side issues that follow upon having found out a fact, its retainers, are most interesting. As what we call the air in music adds greatly to its charm. Yankee Doodle may be made delightful.

Here comes into use the study of the knothole by Bailey's plan. Through it we may be able to reconstruct the whole tree. The work grows larger and larger as we go along. In all of it there is a great deal of manual training. If you have anything in the school that is labeled manual training, why not do as Dewey does and let the children learn all through the hand. Other senses only help; feeling is the main thing. They feel their way at first. We could leave manual training out of our course if we would teach nature study as Dewey would have us. I would not say, "learn to do by doing," but I would put the thought into better shape and say, "we learn to do things while we are doing them." We are led to do things and afterwards to see how we do them.

Work not carried on this way is drudgery. A great many people look upon all manual labor as drudgery. Some years ago a man stood on this platform and said labor of the head is ennobling, but manual labor is degrading. How Edward Hale could ever have gotten that idea I cannot conceive. For an antidote to such thinking, read the first chapter in "Old Red Sandstone," a book printed when I was a little lad. It was written by a man who was put to work breaking stones for eighteen years. Every day of the eighteen years he learned something. Every rock broken taught him something. From knowing nothing of geology he came to know more about it than any geologist in Europe, even before he knew the name of the science. And when he had gotten so full of this knowledge through working at his trade, he was discovered and placed on a higher pinnacle, placed where he could spend all his time in discovering what the rocks say. Labor was pleasant to him, though at first he went to his work in the quarry with foreboding. He was not an ignorant boy; he had always had open eyes for things about him. That first day when he put in a blast it let down two little birds that leavened the first hour of work for him. Then he saw in the rocks the ripple marks of the beach, and could understand what it meant. He worked through the day and went home at night less tired than when he had hunted birds' nests on the cliffs.

We want people to see that work with the head alone will never lift to heaven, and that work with the hands without the head is degrading. Let nature study help children to appreciate the splendid conditions of the world that surrounds them, that work of the hands and brain together is ennobling and lifts to heaven.

Talk on Seeds.

I.

What is the use of a seed?

(a.) To the plant itself? It is a means of its continued existence in the world. The child knows that. Do not talk much about it. It is for higher grades.

(b.) To animals? Let the children tell. They will be able to. Then, if you know something particularly interesting, something that you have found out yourself, tell it.

(c.) To man? Perhaps they will say for medicine. Yes; but this is not important. The castor oil is good for medicine, but the castor bean is good and sweet. I have given the castor beans to girls in the High School, and they have found it sweet and pleasant, and have asked me if they might eat more. I did not say they might. The mustard seed is particularly interesting, but mustard oil does not taste like mustard. It tastes like sweet oil. Indeed, much that is sold for the poorer grades of sweet oil is likely to be mustard oil. Oils do not carry taste. The particles that give taste must be dissolved in order to be tasted.

The matter of seeds as food can be carried out in an interesting way. The coffee bean can be pulled apart and the two seeds leaves shown. Let the children find when they break the vanilla bean open that, though it looks like a bean, it would take many thousand of these seeds to make one bean, even the very smallest they ever saw. The vanilla plant is the only plant in the orchid family that is used for food in any way.

II.

Dissemination of seeds.

Get at it in a general way. The seeds that have wings are the higher growing seeds, growing mostly on trees; those that have down grow lower. Besides the elm and maple mentioned on the outline, the ailanthus, or tree of heaven, and the pine have winged seeds. So do the catalpa and the Paulonia, which is not the catalpa, though its beautiful clustered purple blossoms are so nearly like the catalpa blossoms that many people here call it the catalpa. It is well to remember that many so-called seeds are really fruits, but it is not worth while to make this distinction with the children before they reach the eighth grade. Some seeds are provided with hooks by which they scatter themselves. Such are the seeds of the cockleburr, the burr-clover and the horehound. The hooks of the clover fasten themselves to your clothing and you carry them and the seeds about in spite of you. All of the hooked seeds are disseminated by being carried about by animals to whose fur, or wool, or hair they stick fast. So the hooks are made to get them free rides on such animals and on men who wear clothes made of fur, wool or hair.

It is an interesting sight to see the tumble weed as the whole plant goes rolling over the ground. If you start out early enough in the morning you may see it. All pig weeds are tumble weeds. If you examine them you will find the small black seeds. It is no use for a farmer to think he can keep tumble weeds out of his fields if his neighbor has them.

Seeds disseminated by explosive bursting of pods. The pods burst open suddenly and the seeds are thrown out. You see this in the little red-leaved oxalis. If near when the pod explodes, you may get the seed in your eye. The seed shoots out as a boy shoots plum stones. High School students will investigate this.

III.

How are seeds protected from insects, cold and damp?

By pods. Many pods have only one seed in them. Let the children see a sunflower seed. They see that the pod has dried up and protects the seed. They will find the inner coat and the strong overcoat. They have seen the burrs on the chestnut and other nuts, and the husks of corn. The shell of the peanut is permanent and a protection. But against what does it protect?

There are two seeds in a cockleburr—the plainest proof that the cockleburr is a relative of the sunflower. Take out the seed and taste it. The whole difference between it and the sunflower is in the clothing of it.

IV.

How are seeds plantsd by nature?

Part of the planting is to carry the seed away from the place where it grew. I have already suggested ways in which animals and birds do this. Then when seeds have fallen to the ground, the rain runs off the bumps and washes them into the hollows, the very places where it is best for seeds to be, and where the soil is washed down and covers them. The wind helps. The vacant adobe lots are swept clean by it. All over the hard-packed surface cracks run in every direction. And every crack has caught many or few seeds that have been carried along by the wind, or that have crawled there. By the way, wild oats *crawl.* When the wet weather comes all these seeds grow up and make beautiful patterns of green, tracing the outlines of all the cracks.

Birds scratching help to cover the seeds. How do birds scratch? How do quails help to cover seeds? Animals for example, squirrels, help to plant and cultivate the seeds. Gophers are very active in this way, but we draw the line when they want to cultivate our gardens. We want to manage our gardens in our own way. The falling leaves cover up the buckeyes and so save them. There would be no buckeyes if it were not for the falling leaves. The buckeyes roll down into the leaves, and snugly covered there, they germinate and send a little root far down thrugh the leaves into the ground. The rain washes dirt over the seeds. The children will see this.

A great lot of the seeds do not get to the right place. Many never germinate at all, and only a few that do sprout ever grow up into plants. Is not this a great waste? Are flowers prodigal? Are they prodigal of their pollen, when a thousand grains are scattered and lost and only one reaches the ovule? Are plants prodigal of their seeds when one plant has a thousand and only ten grow? I say, No; it is true economy. True economy expends all that is necessary to get the thing it must have.

V.

This study of dry seeds is not often carried out as far as indicated here. The teacher must use judgment and tact. If I were a preacher I would stop even at secondly if the audience were going to sleep. Stop if your pupils are not interested in the study. They will be interested in the micropyle, which means the

little gateway. What is to go through that gateway? It is an opening to admit moisture, but that is not the only reason for the hole. It's last use is to enable the seed to get out. It is a tiny hole and not big enough for the little plant to get out, but it will help.

Some School-Room Experiments.

VOLNEY RATTAN.

I appear before you again for the purpose of helpin this matter of nature work. Someone has suggested to me that it might be well to show how some things in connection with nature study may be done in the schoolroom, and that some time could be profitably spent in answering questions. You will, therefore, not take what I say in these lectures to be in the way of type study, but you will get out of it what you want.

I propose today to show what a simple thing it is to discover what a potato is and what it is made of. It is not necessary in schoolroom work that the children should learn all about a potato, but it is necessary that they very soon learn what a potato is. Here is a potato. Now to prove to the children that this is not a root, but a part of a stem living underground, is not easy unless we have young potatoes, and then not unless we carefully wash them and call attention to the roots and the eyes or buds. Show that the terminal bud is above ground. Then call attention to other stems that are already going forward to change their mode of life. Instead of pushing forward out of the ground, they grow big, thick, and fill up with some material very different from what we expect in a stem, but we know it to be the same old stem. The buds are crowded together at the end. The potato, as a rule, does not go on any further, but sometimes after it has made this kind of a stem under ground, if the warmth and everything is favorable, then this stem stops and makes a young potato. Children may see this. You will have to dig under ground to see it. I remember how interesting it was to me to discover this after I had been digging potatoes a number of years. I look back with wonder that I had not known before what a potato was, and how it grew. If I had known it I would have had a good time when my mother sent me to dig potatoes. I would have been more interested in the baby potatoes than in the backache. The work would have been vitalized by such knowledge. It is not desirable in a potato that it should send out many of these branches. It is a good quality of the Burbank potato that it does not make many branches. A potato with many branches does not look so well on the table. A man who wants potatoes with branches can get them, but they are not of much commercial value, unless other qualities should balance these. The market wants smooth potatoes. We cannot see these characteristics of the potato unless we have the whole potato vine.

If the children have investigated to see where the sprout is, then have sections of the potato cut and stained with red ink. For preliminary experimenting with ink the geranium is a good plant. Ink will go up into the stalk in half an hour, showing that the blood of the plant travels in the stem of the geranium. The part of the stem which is stained is really wood. You may also stain a piece from a poplar tree. This is the test for woody fiber in any plant. Wood fiber amounts to veins. In it the sap runs. In it the red stains are found after the ink experiment. Slice sections from the potato with a slicer. After placing the slices of potato in red ink, if they are held to the light, they will show a line of red dots not far from the margin. I have seen slices that had not dots enough to be continuous. Inside this line of woody fiber is the pith which makes up most of the potato. Between the woody fiber and the skin is the inner bark.

Now, if I wish to show you, little children, what a potato is made of, you would say, take it to pieces. If a boy should want to take a clock to pieces, he might smash it with an ax; beginners are apt to be just as careless. We must be more careful, or we shall spoil the machine before finding out how it runs. We find out what a potato is by taking it to pieces. Take off the skin from the part you want of it. Then use the grater. You can make a very good grater, better than one you can buy, from a yeast powder can. Melt the solder from the seams, spread it open, make holes in it with a nail. Turn the edges back so that it will look like a grater. You can make it in ten minutes. If the grater is too coarse, it does not tear the potato to pieces enough. The starch is in very small sacks, which must be torn to pieces, and the starch separted from the cellulose. After grating you will strain the grated mass through cheese-cloth very thin. What will do for pillowcases will not separate the starch from the cellulose. Put the cheese-cloth loosely into the mouth of a jar or other vessel so that what comes through will be caught. Now grate the potato. Do not bear on too hard, or grate too rapidly, lest the potato be broken into chunks or the gratings be too coarse.

Let us get to something very definite. This potato

weighs a pound and a quarter; very handy; you can grate off a pound, and leave a handle. Grate down several pieces to an even three or four pounds. You can separate and dry the starch and the cellulose, and weigh each, and so you have hit upon a way to analyze the potato. If you grated three pounds of potato and get from it three ounces of starch, or ten ounces of starch, you can easily find what the per cent of starch is—three ounces to forty-eight ounces, or ten to forty-eight ounces. Then we can weigh the cellulose left in the cloth, and dried, and find out what per cent of it. But what of the rest of the potato? You have a certain amount of starch dried, and a certain amount of cellulose dried. Much of it is water. If there was any sugar or anything that was soluble, then something was lost. Taste the water, to see if sweet. Anything soluble has a taste. Anything not soluble will remain as sediment or scum. For the classes in school it is not necessary that this weighing should be done very carefully. For children it is enough to see that there is so much starch out of so much potato, and get the idea what they eat when they have potato.

When grating, can talk the matter over with the children. Do not be so piggish as to do all the talking, but might ask them to ask questions. I would like to have you ask questions if everything is not clear. Make a sieve of your cheese-cloth to separate the pulp from the starch. The pulp will remain in the cloth after you have rubbed and squeezed the starch through into the water. You can show both starch and cellulose in the wet state.

One caution: Do not let the cut potato be exposed to the air too long. Have the grated part going under water all the time, if you want white starch. Some of the starch has gone through your cloth; now, with thumb and finger, help the rest to get through. But if you wash ever so long not all will get through, but each time you soak and squeeze it you will make more go through. Starch grains are heavy and sink in the water like cobble stones. The water will be absolutely clear in half an hour, very nearly clear in a few minutes. When through talking give all a chance to see how what is left inside the cloth looks like.

Inside the cloth is a compact mass. It is the fiber in very small pieces. This fiber part is the wood. Spread it out to dry. Pinch the pices, and separate them so that it will dry quickly. It will always be greenish in color, not snowy white like starch. While you have been talking, the starch has been settling, you can see it in the bottom of the jar. Pour off the water now.

This whole experiment can be made in one day. The starch will dry very quickly, but the cellulose will take more time. The children would like to do this at home if their mothers would let them. Be cautious about insisting that the children do a whole lot of things out of school which the parents do not see the reason for. Difficulties may arise. These things must be managed in a common sense way.

Just what is wanted to separate gluten from starch in flour? Tie up the cloth with the pulp in it loosely. Put it in a shallow pan of water and knead and work it. The water will grow very milky. You think you have all the starch out and pour off the water, and untie the cloth, but the starch is not out. Tie it again and work and knead it more. By and by it will become springy under your hand like India rubber. The starch is out. In the days of boyhood I made a gluten by chewing wheat, chewing each mouthful with the rest, until by and by I would have in my mouth a lump of gluten, with little specks of bran through it. I could chew on it all day. By another experiment tried in those days I found out that India rubber would make excellent white gum. A bit of an old rubber shoe answered every purpose. Rubber is the basis of all chewing gums. This was the kind of nature study I did when I was a boy. It is quite a revelation to one who has not investigated to find that we get gluten thus.

Now for the starch that we got out of gluten. Must wait until next day before it will settle. It is very fine and looks like clay. It does not settle readily; after months you may see that it has not all settled yet. But sink it will in time. Then dry and weigh it. Out of it we make macaroni and vermicelli. It is the gluten that shows in the piecrust, after grandmother has rolled it out a good many times. Rolling tends to break up the grains of starch, but if she rolls it too much, it makes the crust tough. Mother had found out just the right time to stop, and she made the best pie crust for me.

Question 1. How will the children know that that is starch?

Do not apply what chemistry calls a test, but bring some starch to school, and let the children feel it and taste it. They will know it. Then another day bring another kind, and let them try this. They know the starch by its taste and by its feel. Do they know it by its feel in the dark? The teacher says the iodine is a test for starch; it may be to her and to the chemist, but often it is no test at all to the class. The change in color does no prove anything to the pupils. A better

way is to let the child try the starch and see if it has the qualities which he has found in other kinds of starch.

Question 2. What is the difference between cornstarch and washing starch?

There is not any real difference. The topic is starch. The child will not believe the two are alike because one has gone through a natural process which has changed its appearance. Cooking has made a physical difference. Only the cook can tell whether blanc mange is made from potato or cornstarch. The difference between the forms of starch we express by saying corn or potato starch.

XII. (Outline.) How does light affect the cotyledons? What effect does it have upon the color? See how it is that one part goes downward to form the root and another part upward to form the stem. In my little book I have made a desperate attempt to make this plain, because in the volumes on botany we consult my book for this. We might explain and explain how the primary root sends off secondary roots until we explained it all away. If a person understands it pretty well he will be apt to say he does not understand it well, but if one takes the statements for facts, he will think he knows all about it. Those seeds that we choose for experiments are not always normal seeds. Beans do not grow the way most seeds do, nor do peas. That is why children's attention ought to be called to the fact that all cotyledons are not above ground. If the plants grow in the mountains then you may find some with cotyledons below.

Seed for experiment. Must have large one. Squash seeds will do. Growth pushes the plant up. Take the sunflower. Its growth of caulicle pushes the cotyledons up above the ground. The cotyledons ought to grow green in order to do good leaf work. When two inches long the sunflower cotyledons have become good green leaves and are doing the work of leaves. It is with the cotyledons as with the stomachs of a calf. At first the calf-stomach can digest only milk. It must undergo change before it can digest stronger food. So it is with cotyledons, they can not do the work of leaf digestion at first. The sugar stored in them is changed into tissue. A part of it feeds the cotyledons themselves, and a part when above ground helps the plumule to make more and more leaves. This gives strength. Water comes in to help the plumule. Finally the cotyledons are developed into leaves which do very good digestive work. By and by when they have done their work, some cotyledons fall off; they have used all the digested material, and become dry and dead.

Here it may be necessary to do a little investigation. How does one part go down and form roots, and one upward to form a stem? We can tell before germination the difference in the two parts. The normal behavior of a seed in germination is to sends its caulicle upwards. It could not do so if it did not go down and anchor. The caulicle first tries to get a vertical position. Experiment to see this. Plant a bean with the apex downward. When it germinates it will right itself. The caulicle will get into a perpendicular position. This is a thing not so difficult to see, but we are likely to forget it.

What is the use of cotyledons? If they shrivel up they do not become the first pair of leaves. Plants of this kind, in which the caulicle pushes the cotyledons above ground, but whose cotyledons never become real leaves, form a connecting link in germination between the sunflower and the bean, for the leaves ought to be above ground. The plants in the pea family have progressed much farther. They are highly educated. They are higher plants than some others in two ways; their flower is higher than the roses, and in coming up above the ground, they do their work better and more economically. What is the use of the cotyledons? Their business above ground is to do the work of ordinary leaves. At first they are doing work underground, storing food. But above ground they soon become true leaves. The calf has become an ox; the cotyledon has become a true leaf. They can digest water, the true diet of the plant.

Question 3. What makes them turn green? See if the cotyledons grow green. Most children have had some experience, and know that sunlight makes leaves green. Experiment with electric light. See if the leaves take on green. Sometimes parts of the plant turn brown; that part of the plant is dead. Green parts do the work. If we carry our experiment further we find that the plant will make no successful growth if kept in the dark. It will keep reaching for the light.

Is it an interesting thing that a seed can grow up? that it should have enough food stored to make growth enough to push itself above ground? How far can the seed push its way through the soil? Six inches? For some this is too deep. The plants become exhausted before reaching the surface, and can not get out. They do not inherit enough wealth from their mothers to carry them through the desert. The Indian's stomach is large. He can fill up with food

enough to carry him a long journey without eating more food. It is always well to look at animal life in connection with the plant life; and to make comparisons between the two.

NORMAL CLUB LEAFLETS.

No. 1.

Huxley's View of Education.

Suppose it were perfectly certain that the life and fortune of every one of us would, one day or other, depend upon his winning or losing a game of chess. Don't you think that we should all consider it to be a primary duty to learn at least the names and moves of the pieces; to have a notion of a gambit, and a keen eye for all the meaning of giving and getting out of check? Do you not think that we should look with a disapprobation, amounting to scorn, upon the father who allowed his son, or the state which allowed its members, to grow up without knowing a pawn from a knight?

Yet it is a very plain and elementary truth, that the life, the fortune, and the happiness of every one of us, and, more or less, of those who are connected with us, do depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. It is a game which has been played for untold ages, every man and woman of us being one of the two players in a game of his or her own. The chessboard is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of Nature. The player on the other side is hidden from us. We know that his play is always fair, just and patient. But also we know to our cost that he never overlooks a mistake or makes the smallest allowance for ignorance. To the man who plays well, the highest stakes are paid, with that sort of overflowing generosity with which the strong shows delight in strength. And one who plays ill is checkmated—without haste, but without remorse.

My metaphor will remind some of you of the famous picture in which Retzsch has depicted Satan playing at chess with man for his soul. Substitute for the fiend in that picture a calm, strong angel who is playing for love, as we say, and would rather lose than win—and I should accept it as an image of human life.

Well, what I mean by Education is learning the rules of this mighty game. In other words, Education is the instruction of the intellect in the laws of Nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws. For me, education means neither more nor less than this. Anthing which professes to call itself education must be tried by this standard, and if it fails to stand the test, I will not call it education whatever may be the force of authority, or of numbers, upon the other side.

No. 2.

Nature Study from Dewey's Standpoint.

In connection with these occupations, the historic development of man is recapitulated. For example, the children are first given the raw material—the flax, the cotton plant, the wool as it comes from the back of the sheep (if we could take them to the place where the sheep are sheared, so much the better). Then a study is made from these materials from the standpoint of their adaptation to the uses to which they may be made. I did not know until the children told me that the reason for the late development of the cotton industry as compared with the woolen is that the cotton fiber is so very difficult to free by hand from the seeds. The children in one group worked thirty minutes freeing cotton fibers from the boll and seeds, and succeeded in getting out less than one ounce. They could easily believe that one person could only gin one pound a day by hand, and could understand why their ancestors wore woolen instead of cotton clothing. Among other things discovered as affecting their relative utilities was the shortness of the cotton fiber as compared with that of wool, the former being one-tenth of an inch in length, while that of the latter is an inch in length; also that the fibers of cotton are smooth and do not cling together, while the wool has a certain roughness which makes the fibers stick, thus assisting the spinning. The children worked this out for themselves with the actual material, aided by questions and suggestions from the teacher.

They then followed the processes necessary for working the fibers up into cloth. They reinvented the first frame for carding the wool—a couple of boards with sharp pins in them for scratching it out. They re-divised the simplest process for spinning the wool—a pierced stone or some other weight through which the wool passed, and which as it is twirled draws out the fiber; next the top, which was spun on the floor, while the children kept the wool in their hands until it was gradually drawn out and wound upon it. Then the children are introduced to the invention next in historic order, working it out experimentally, thus seeing its necessity, and tracing its effects, not only upon that particular industry, but upon modes of social life—in this way passing in review the entire process up to the present complete loom, and all that goes with the application of science in the use of our present available powers. I need not speak of the science involved in this—the study of the fibers, of geographical features, the conditions under which raw materials are grown, the great centers of manufacture and distribution, the physics involved in the machinery of production; nor, again, of the historical side—the influence which these inventions have had upon humanity. You can concentrate the history of all mankind into the evolution of the flax, cotton and wool fibers into clothing. I do not mean that this is the only, or the best, center. But it is true that certain and very real important avenues to the consideration of the history of the race are thus opened—that the mind is introduced to much more fundamental and controlling influences than usually appear in the political and chronological records that pass for history.—From "Dewey's School and Society."

No. 3.

Social View-point of Education.

[Prepared by C. J. C. Bennett.]

"Education is life," therefore the means and motives of the school should be those of life. Now neither of these are to be discovered by considering the subject-matter only, say plants, and especially not from the professional botanist's point. To consider the matter from both standpoints ignores the learner's way of acquiring. The botanist, or systematic scientist, stands as it were on the mountain top, and looks back on the whole field which, under his analytic eye, falls into logical classes, and orders with fundamental likenesses. But the learner climbing up sees none of these distinctions. He really cares nothing for botany as such, and is interested in plants, rocks or anything only in so far as they answer the practical queries which arise in his effort to make a living, or secure happiness. His problems grow out of and are based on his concrete living. At first, he is interested in the use of things, not remote, biologic uses, but the every-day worth and significance of things, the same values which the early peoples had to learn by experience, and which succeeding generations have been obliged to be told or learn in the same way. Commonly they have learned partly in both ways.

Now, this world knowledge has not come about by beginning off at the edge of the earth e. g. with the life processes of the tadpole, or fish worm, or the butterfly. It has,

though early noticed, the sort of water the one lives in, the home and suppleness of the next, and the beauty and food-source of the last. No doubt some questions one step furthere removed might, under the good teacher's guidance, arise, but on the whole the natural queries will move out from the difficulties and understanding of the child. And these will be in a small degree in any but the most apparent cases, in matters of growth, interaction between organism and environment, or structural arrangements. Nor has this world-knowledge come about by the learner getting his zoology difficulties sorted from his botanical ones, and these from his entomological one , and then proceeding to solve each separately, especially by going back to structural and functional simples. But in the forward movement, man has had to ask how can I be clothed, how fed, how sheltered, how protected. I wonder if this wood will burn; is it strong to build? is it supple for bows? does it grow any nuts or fruits? do any animals or birds live among them or feed off of them which will feed or clothe me, or which I should fear? When do these valuable trees bear fruit, where do they grow? A great many questions which the man interested in things which function alike, or are structurally similar, he never as a practical fellow does ask; as e. g. what are the different ways in which plants scatter their seeds, or what ones grow tubers, or what animals are cloven hoofed. They are interested that cows are sources of food and hides, etc., but no more in their relation to other members of the bovine tribe than they are in how many teeth the cow has or whether those teeth are in one or both jaws.

Nor has this realm of darkness moved back in the people's search for beauty, or examples of sentiment, or material for moral lessons, no more than for the striking or novel. Often these points have been disclosed in the search and are the more impressive because unsought. When any of these beautiful phenomena or those suggestive of cruelty, or adaptation, or thoughtfulness are disclosed, then, when the mind has found something to express, is the time to make a moral observation, or to bring in literature.

In other words, knowledge is human experience, it grows as does man to answer his problems, it is not mere information, or accretion, or the froth and fancy of the mind.

To my mind, then, a practical method would be to take up some industrial situation which the children know about, e. g. a prune ranch, or wheat ranch. Start them to asking and answering questions. The facts mentioned and those they will care for will be those their fathers speak of, such as time of planting, frosts, irrigation, trays, shipping, etc. These can be naturally carried into questions commercial and geographical. When several such typical industrial occupations have been taken up, then begin with the coming of the '49ers, or the landing of the Pilgrims, dwelling on how they kept warm, what they had to eat, what difficulties in growing things, etc. Such study of nature will be that which man comes face to face with, and which has permitted the obstructions and solutions that has brought man to his present state and sort of mind.

No. 4.

Experiments on the Lifting Power of Growing Seeds.

I.

Plant seeds, which you have previously weighed carefully, in sand. Plaster over them molding clay, also weighed carefully. This clay will be raised as the seeds sprout and grow. How much would a boy have to lift if he lifts as much, in proportion to his size, as each of these seeds have raised of the molding clay?

(Read to children from "Boy Travellers in South America," p. 67.)

II.

Fill the heaviest pickle bottle you can find with peas that you intend to plant immediately; pour in water enough to fill the bottle; let the peas soak over night, after corking the bottle tightly. What becomes of the bottle?

No. 5.

Geographical Excursion to Alum Rock.

[Prepared by R. S. Holway.]

In going out Santa Clara street notice that from about Twelfth street the grade is up towards the creek. The Coyote built up its banks by overflow in its early history. Notice that the channel is a gorge at Santa Clara street. At William street or at Taylor street, you will see a rather wide flood plain. As soon as you strike the Alum Rock creek (Penitehcia creek) notice the size of the gravel and stones in the bed. Notice the difference as you go on up the stream. Near the mouth of the canyon look for food plains. Look also for signs of an old channel.

Just above the little station at mouth of canyon study the rocks exposed in the quarry. Notice the conglomerate or pudding stone made from old gravel beds. Look for fossils, faults, fault planes, veins. Notice the thickness of the strata, their dip or inclination and their direction. Try to think out a reasonable history to account for this conglomerate.

At the next bridge notice the black rock on the left—wrongly called a meteorite. It is mainly oxide of manganese, At the tunnel the canyon is very narrow. Why? Climb up to some of these rocks and study weathering. In how many ways is the rock weathering? (Lichens, roots, air, water, etc.) How deep into the rock is it now weathered? Is the depth the same on the top and on the sides of the rocks? In what ways is weathering being checked? In how many ways, during the day, did you see the soil or dirt moved? In each case, as a result of the moving, which way did the moved material finally go?

At some point study the creek itself. Where does the water come from? Is it muddy? Is it soft or hard? What is hard water? Find a bend in the stream. Where is the deepest and swiftest current? Where is there the most erosion? The most deposit? Why?

Find a smooth reach or level stretch of water. Why is it located just there? Examine the structure at the lower end of the reach—at the upper. Account for the deposit of cobblestones, gravel, sand, mud. Is the bottom of the reach being cut down by the stream? Why?

Look closely at the stream somewhere and see if you can notice that at the bottom the stream is dragging material that it cannot freely carry. How does the stream get its load? At the mineral springs do you find deposits made by the mineral water? Study the stalactites and stalagmites.

Look for illustrations of technical terms. Watershed, river, basin, spring, tributary, falls, rapids, delta, lake, bar, etc.

Make notes of the points and questions that came up during the day which are not suggested here.

No. 6.

Nature Study Series—Suggestions for Research.

Teachers are requested to consider answers to the following questions and come with any suggestions they may have to the Normal Club meeting tomorrow, Thursday, February 27th, at 3:30 p. m. This material will be filed with the committee of nine on Field Work to be reported to the club as promptly as possible. Please give any information you may have even though it may be but partial. Suggest if you can where the shrub, tree, or plant that you think may be valuable for our purposes may be found for transplanting. Enlist the services of your pupils so far as you deem it wise.

What native California trees or shrubs are suited to be grown in school yards for ornamental purposes?

Judge of the suitability of the trees upon the following basis:

(a) Natural beauty of the trees or shrubs.

(b) As an attractive nesting place, food supply and home for birds.

(c) As an attractive environment for insects.

How many of the belfreys of the school houses in San Jose are homes of the Barn Owl?

What native California animals could be grown in the schoolyard as an attraction to our larger and more brilliant insects?

What cultivated flowers, such as honeysuckles, verbenas and so forth, are especially attractive to humming-bird sphinges, etc?

No. 7.

Seedlings.

Prepared by E. E. Brownell.

PLANTING OF SEEDS.

Soaking Seeds in Water—

1. Manner in which water is admitted into bean, pea, pumpkin, corn, etc.
2. Effect on seed.
   (a) Softens the seed coat.
   (b) Absorbs water.
   (c) Increases size.
   (d) Bean seed, the coat wrinkles first, then the coat becomes smooth. Cause of this?
3. Is soaking necessary? What advantage is gained by soaking the seed?

Manner of Growing Seeds—

1. Hidden from sight in the ground and in sawdust.
2. In constant view in tumblers, lamp chimneys, test tubes, box with glass door, on damped blotting paper in saucers.
3. Experiments with light, heat and moisture.
   (a) Plant seeds in dry ground or sawdust. Effect?
   (b) Plant seeds in damp ground or sawdust. Effect?
   (c) Plant seeds in boxes of sawdust, some in the warm sunlight, others kept in the dark. Effect?
   (d) Why seeds grow better in spring than any other season?

GROWTH OF THE SEED.

Development of Root—

1. Pointed small white object emerges first. Direction of its growth? Value? Reason? Experiment?
2. Comes from region of micropyle. Location of the micropyle determines where root comes from in sunflower, pumpkin—sharp end. Bean and pea—from the side.
3. Growth downward forms its main rott. Use?
4. Root acts as a wedge to force cotyledons apart and break seed coats.
5. Barley, wheat and grasses—many little roots come at once instead of one.
6. Development of secondary roots—tiny knobs at first—formed near seed.

Growth of Stem—

1. Starts at about same place as the root.
2. Grows in opposite direction.
3. Some plants lift cotyledons and seed coats above the ground; as pea, corn and barley.
5. In bean, pumpkin and castor bean cotyledons turn green and form two elliptical leaves. The first pair true leaves forms between cotyledons.
6. Cotyledons have given food to form plant tissue.

No. 8.

Ferns.

Prepared by E. E. Brownell.

1. Place of growth. Hill or valley? Shady or sunny places? Reasons?
2. Distinguish common forms, such as Brake, Shield Fern, Gold Back, Maiden Hair, Five Finger.
3. Size of various kinds. Tropical ferns.
4. Green portion resembles leaves in color—sometimes in shape, frond, much indented edge.
5. Root part, color, manner of growth, dead stalks, what they represent, rhizoids.
6. Flowerless Plant. Does not form any seeds. Reproduces in another way. Forms spores.
7. Under side of leaf. Spots or sorii. Use? . Spores Where formed? Size? Spore forms prothallus. Of prothallus size, color, where found, when found? Use?
8. Alteration of generations. Two distinct growths. Prothallium and fern. Each independent of the other. Alternation of size, alternation of sex.
9 Size and prevalence of ferns in the Carboniferous Age? What they formed?

No. 9.

Best 100 Prose Works.

[Prepared by H. M. Bland.]

[The prose works given below have been selected with reference to the needs of school children. Consequently they have been drawn from a very wide range of literature, including Myth, Story, Science, Art, History and Biography. The great classics, in so far as they could be adapted to the child-mind, have been included in the list. In-as-much as the books are for California Schools, a good deal that has a western flavor has been listed. The beautiful story form in which most of the selections are written bespeaks of their epescial adaptation to the school library.]

1. Old Time Stories—Smythe.
2. Robinson Crusoe for Youngest Readers.
3. Classic Stories for the Little Ones—McMurry.
4. Fairy Tale and Fable—Thompson.
5. Docas—Snedden.
6. Little Wanderers—Morley.
7. Letter from a Cat—Jackson.
8. The Seven Little Sisters—Andrews.
9. Black Beauty—Sewell.
10. Krag and Johnny Bear—Thompson.
11. Stories of American Life and Adventure—Eggleston.
12. Little Women—Alcott.
13. Little Lord Fountleroy—Burnett.
14. Swiss Family Robinson—Wyss.
15. Story of the Chosen People—Guerber.
16 The Water Babies—Kinsley.
17. Ways of Woodfolk—Long.
18. Short Stories of Our Shy Neighbors—Kelly.
19. Fanciful Tales—Stockton.
20. Jungle Books—Kipling.
21. Stories of Great Americans for Little Americans—Eggleston.
22. Boys' Own Book—DeWolfe Fiske & Co.
23. Stories of Insect Life—Weed.
24. Oriole Stories—Lane.
25. The Birds' Christmas Carol—Wiggin.
26. Big People and Little People of Other Lands—Shaw.
27. The Crofton Boys—Martineau.
28. Arabian Nights.
29. Alice's Adventures in Wonderland—Carroll.
30. Folklore Stories and Proverbs—Wiltse.
31. Wilderness Ways—Long.
32. Stories of Our Mother Earth—Fairbanks.
33. Wonder Book—Hawthorne.
34. Poor Boys Who Became Famous—Bolton.
35. Two Years Before the Mast—Dana.
36. Boys of 76—Coffin.
37. Tales of a Grand-father—Scott.
38. Ten Boys—Andrews.
39. Fifty Famous Stories Retold—Baldwin.
40. Sir Bevis—Jeffries.
41. Little Lame Prince—Mulock.
42. Fairy Tales—Rolfe.
43. Those Dreadful Mouse Boys—Ariel.

44. Stories from English History—Blaisdell.
45. Child Stories of the Masters—Menfee.
46. The Story of a Short Life—Ewing.
47. Little Men—Alcott.
48. Tom Sawyer—Twain.
49. Treasure Island—Stevenson.
50. Pacific Nature Stories—Wagner.
51 Captain Courageous—Kipling.
52. Fables—Aesop.
53. Old Stories of the East—Baldwin.
54. Tanglewood Tales—Hawthorne.
55. A Dog of Flanders—Ouida.
56. The Last of the Mochians—Cooper.
57. Star Land—Ball.
58. Story of the Greeks—Guerber.
59. Man Without a Country—Hale.
60. Wild Animals I Have Known—Thompson.
61. Stories from Virgil—Church.
62. Stories from Old Germany—Pratt.
63. The King of the Golden River—Ruskin.
64. The Hunting of the Deer—Warner.
65. Autobiography—Franklin.
66. Old Times in the Colonies—Coffin.
67. True Story of Columbus.
68. The True Story of Washington.
69. Story of the Thirteen Colonies—Guerber.
70. Hoosier School Master—Eggleston.
71. Tales from Shakespeare—Lamb.
7' Donald and Dorothy—Dodge.
73. Vicar of Wakefield—Goldsmith.
74. History of the U. S. for Young People—Eggleston.
75. Northern Europe, Youth's Companion Series.
76. Robinson Crusoe—Defoe.
77. Boys of '61—Coffin.
78. The True Story of Abraham Lincoln.
79. Plutarch's Lives.
80. Pilgrim's Progress—Bunyan.
81. Old Curiosity Shop—Dickens.
82. Ivanhoe—Scott.
83. Story of the Iliad—Church.
84. Reply to Hayne—Webster.
85. Matka & Kotik—Jordan.
86. Child's History of England—Dickens.
87. Story of the Great Republic—Guerber.
88. Riverside Art Series—Rembrandt.
89. The True Story of U. S. Grant—Brook.
90. Shells and Sea Life—Keep.
91. Uncle Tom's Cabin—Stowe.
92. The Beauties of Nature—Lubbock.
93. Romance of the Insect World—Badenoch.
94. Tropical Africa—Drummond.
95. Pacific History Stories—Wagner.
96. Self Help—Smiles.
97 Sketch Book—Irving.
98. Don Quixote—Cervantes.
99. The Story of the English—Guerber.
100 Stories of Ancient People—Arnold.

Poems for Memory Work.

FIRST YEAR GRADE.

Little Drops of Water.
Twinkle, Twinkle, Little Star—Old State Second Reader.
The Pied Piper of Hamelin (abridged)—State First Reader.
Once There Was a Little Kittie—McCuffey's Second Reader.
The Gingham Dog and the Calico Cat—Eugene Field.
Fussy Cat Out for an Airing One Day.—State Ele. Language Book.
Mary Hal a Little Lamb.
Two Little Kittens One Stormy Night.—Barnes' Third Reader.
A Million Little Diamonds.

SECOND YEAR GRADE.

Wynken, Blinken and Nod.—Field.
Suppose.—California Second Reader, Old Series.
Strike While the Iron's Hot.—California Second Reader, Old Series.
At the Door on Summer's Evening.—From Hiawatha. (25 lines).
The Daffodil.—California Second Reader, Old Series.
The Dandelion.—California Second Reader, Old Series.
Buttercups and Daisies.—California Second Reader, Old Series.
I Know the Song That the Blue Bird is Singing.—California Second Reader.

THIRD YEAR GRADE.

We Were Crowded in the Cabin.—Jas. T. Fields.
Bed in Summer.—Stevenson.
The Lilacs Are in Bloom, the Cherry Flowers Are White.—California Second Reader, Old Series.
There is No Dew Left on the Daisies and Clover.—Jean Ingelow.
Daffydownilly.—Miss Warner.
Night and Day.—Stevenson.
Sweet and Low, Sweet and Low, Wind of the Western Sea.—Tennyson.

FOURTH YEAR GRADE.

Barbara Frietchie.—Whittier.
Ride of Paul Revere.—Longfellow.
The Night Before Christmas.—C. T. More.
The Wind.—Stevenson.
Beautiful Hands Are They That Do.—California Second
Hiawatha's Sailing.—Longfellow.
Reader, Old Series.
The Song of the Brook.—Tennyson.
Casabianca.—Hemans.

FIFTH YEAR GRADE.

My Beautiful, My Beautiful, That Standeth Meekly By.—McGuffy's Fourth Reader.
Old Ironsides, the Village Blacksmith.—Longfellow.
Stay Not Fettered in Inaction—Goethe.
Woodman, Spare That Tree.—Morris.
We Are Seven.—Wadsworth.
Ring Out, Wild Bells.—Tennyson.
Breathes There a Man With Soul So Dead.—Scott.

SIXTH YEAR GRADE.

Thou, Too, Sail On, O Ship of State.—Longfellow.
The Voice of the Grass.—McGuffey's Fourth Reader.
The Old Oaken Bucket.—Woodworth.
A Sea Song.—Cunningham.
Abou Ben Adhem.—Hunt.
The Day is Done.—Longfellow.
The Burial of Moses.—Alexander.
The Burial of John Moore.—Wolfe.
The Mountain and the Squirrel.—Emerson.

SEVENTH YEAR GRADE.

The Sea.—Barry Cornwall.
Lochivar.—Scott.
The Breaking Waves Dashed High.—Hemans.
Charge of the Light Brigade.—Tennyson.
Destruction of Senacherib.—Byron.
Introductory Stanzas to Sir Launfal.—Lowell.
Introductory Stanzas to Evangeline.—Longfellow.
Introductory Stanzas to The Lady of the Lake.—Scott.
Eve Before Waterioo.—Byron.
Paalm of Life.—Longfellow.

EIGHTH YEAR GRADE.

To a Waterfowl.—Bryant.
The Lost Leaf.—Holmes.
The Blue and the Gray.—F. M. Finch.
Break, Break, Break.—Tennyson.
The Baby.—MacDonald.
The Death of the Flowers.—Bryant.
Soldier, Rest.—Scott.
The Daffodils.—Wordsworth.
The Chambered Nautilus.—Holmes.
The Quality of Mercy is Not Strained.—Shakespeare.
Look How the Floor of Heaven.—Shakespeare.

[The foregoing selections for memorizing have been

based upon the interests natural to the early stages of child development. To that end the element of rhythm or music largely prevails in those poems given to the younger children. The story element, while not neglected, is not so conspicuous as it is in those poems suited for the reading of higher grades. In the poems suited to intermediate grades a distinct emphasis is laid on the dramatic or story side, at the same time the selections are highly musical. Only in the seventh and eighth grades is poetry having the reflective element emphasized introduced.]

No. 10.

Pressure of Gases.

[Prepared by L. B. Wilson.]

1. Fill a tumbler with water, cover it with a blotter, invert the tumbler. Why does the water not fall out? Prove that the blotter does not hold the water up.

2. Half fill the tumbler with water, cover with a blotter, and invert the tumbler. Why does the water not fall out?

3. Place a small stone (weighing less than the water in No. 2) in the tumbler, cover the mouth of the glass with a blotter and invert the tumbler. Why does the stone drop out?

4. Try Nos. 1 and 2 by holding the tumbler horizontally. Explain.

5. Call the weight of the water in the tumbler in No. 1 one pound, and tell the pupils that the pressure of the air is about 15 lbs. per sq. inch. What is the weight of the water in No. 1, pressing down on the upper side of the blotter? What is the upward pressure of the air on the underside of the blotter? If you should let go of the tumbler, why would it not be pressed upward into the air? Would the result be different with a conically shaped glass?

6. Fill a thin flask with water and cork the flask with a stopper containing a glass tube. Why does the water raise in the tube? Why remain there? Blow into the tube, remove the mouth and explain results.

7. Insert a glass tube vertically into water, place your finger over the upper end of the tube and slowly lift the tube out of the water. Explain results. Remove your finger from the end of the tube and explain results. Place the tube part far into the water, cover the end of the tube

8. with your finger, lift the tube and explain results. Place one end of tube in water, and partially exhause the air with your mouth, and explain results.

8. Practical applications of air pressure,—barometer, siphon, pumps.

Report on Course of Study.

In November, 1901, the Normal Club co-operated with the Principals of the City Schools of San Jose in illustrating the method of teaching Nature Work. This was done with a view to giving some practical aid in the work to the teachers of San Jose. The following is the outline in plant work planned and adopted by the Normal Club and the Principals.

The committee having in charge the outlining of a course in Nature Study for the city schools has given much thought and considerable time to the perparation of the same, and as a result has presented the following outline:

They wish to place emphasis upon the fact that this COURSE is intended to be SUGGESTIVE ONLY, and that it is not to be substituted for any line of nature study which any class or teacher in the department may be doing or which they may have planned to do. Teachers should be encouraged to do that in which they are most interested.

It is the opinion of the committee that each class in the department should study one or more plants of a group and be made familiar with the common names of the other members of that group, as CORN of the grasses, HEMP or FLAX of the fiber plants, the POTATO of the tuberous plants, the CABBAGE of the heading plants, the ONION of the bulbous plants, etc.

The Sixth, Seventh and Eighth grades should be taught budding, grafting and slipping. For example, the budding of the rose, the grafting of the prune or the peach, the slipping of the wandering Jew. The latter may be rooted in a glass jar of water in the room for observation.

In addition to the above, each teacher should teach preparation of soils, irrigation, planting of seeds, transplanting of plants and cultivation of soils to conserve moisture.

ALL OF OUR PUPILS SHOULD BE ENCOURAGED TO USE YARD SPACE AT HOME for the PRACTICAL RAISING OF VEGETABLES AND FLOWERS. They should be impressed with the fact that animal life is largely dependent upon vegetable life.

Suggestions for Nature Study, Beginning November, 1901.

[Prepared by R. A. Lee.]

I.

Collect seeds for comparison as to

(a) Size—Cocoa-nut, mustard, etc.
(b) Shape—"Nigger-toe," beech-nut, corn, pea, wheat, etc.
(c) Color—White, corn, yellow corn, black corn, etc.
(d) Weight—Canna (Indian shot), maple, elm, etc.
(e). Producing power—Mustard, pine, etc.

References:

"What is Nature Study."—Cornell Teacher's Leaflet. No. 6.
"Seeds."—Pop. Ed., May, '95, page 402.
"Nuts."—Pop. Ed., Dec. '95, page 173.
"Seed Study."—Prim. Ed., Apr. '95.

II.

For future use preserve seeds of—

Apple in dry sand.
Cherry in dry sand.
Pear in dry sand.
Apricot in seed bed.
Chestnut in moist sand.
Almond in moist sand.
Citron in moist sand.
Lemon in moist sand.
Lime in moist sand.
Olive in moist sand.
Orange in moist sand.
Peach in moist sand.
Plum in moist sand.
Quince in moist sand.
Walnut in moist sand.
Fig.
Laurel.
Acorn.
Pine.
Toyon.
Buckeye.
Evergreen.
Maple.
Cherry.

(a). Remove pulp.

(b). Dry a few hours in the sun.
(c). Do not "bake" in sun or oven, for the seeds then shrivel and may take two seasons to germinate, and then produce only poor plants.
References—
Propogation."—"The Rearing of Fruits from Seeds." (State Board of Horticulture).

III.

What is a seed?
(a). Child's idea.
(b). Your idea.
(c). Botanist's idea.
(d). Dictionary definition.
(e). The child's idea is best.
References:—
"Pollen Grains in Water and Sugar."
"How Ovules are Fertilized,"—Jenkin's pamphlet, page 35.
"The Bee and Pollen."—Jenkin's and Kellogg, pages 51-59.

IV.

Of What Use is a Seed?
(a). To the plant reproduction
(b). To animals—squirrels eat acorns—bears eat pine nuts, etc.
(c). To man.
1. Medicine—anise, flax, castor bean, mustard, etc.
2. Food—Wheat, cotton seed (cottolene), coffee, etc.
3. Other uses—Flax seed makes linseed oil, etc.
4. Vanilla bean.

V.

Dissemination of Seeds.
(a) Wings (Winds)—Elm, Maple, Pine, Alianthus, Catalpha, etc.
(b). Pappus or down (winds)—Lettuce, milk-weed, cotton, etc.
(c). Hooks—Cocklebur, clover, horehound, etc.
(d). Pods—Locust, etc.
(e). By crawling—Geranium, alfilaria, barley, oats, foxtails, etc.
(f). Streams—Oak acorns, etc.
(g). Ocean currents—Cocoanuts, etc.
(h). Birds (feet, feathers)—Mustard, etc.
(i). Animals.
(j). By rolling—Pen, bean, four-o'clock, tubble weed, etc.
(k). Explosive bursting of pods.
References:—
"Dandelion," "Cockle bur," "Maple," "Pine,"—Jenkin's and Kellogg, pages 7-11.
"How Plants scatter their seeds."—Intelligence—Sept. 1, '01, page 519.
"Seed Carriers."
"Plant structure by which Seeds are Dispersed."—Pop. Ed.—Oct. '99, page 69.
"Seed Journeys."—The Child's World, Oct. 1900.
"Poem—On the Chestnut"—Pop. Ed., Nov. 6, '96, page 123.
"Poem—On the Milk Weed"—Intell., Sept. 1, '01, page 519. Pop. Ed., Oct. '99, page 63.
"Seed Travelers"— Teachers' Institute, Nov. '94, page 66.
"Transportation of Seeds"—Thorean.

VI.

How protected from insects, cold and damp?
(a). By pods—pea, bean, etc.
(b). Burrs—chestnuts, castor bean.
(c). Husks—corn, walnut.
(d). Shell—pea nut.
(e). Pulp—orange, apple, cherry.
(f) Rind—watermelons, pumpkins, muskmelon.
References:—
"Protection and Escape of Seeds."—Pop. Ed., Nov. '96, page 122. Intell. Oct. 15, '01, page 637. Pop. Ed. Oct. '99, page 63.
"Nuts."—Pop. Ed., Nov. '96, page 173.
Poetry—"The Nut Asleep."
Poetry—"The Milk Weed," Pop. Ed., Dec. '96, page 123.

VII.

How Planted by Nature."
(a). Earth worms and insects help to cover them.
(b). Birds scratching help to cover them.
(c). Animals, as squirrels, help to cover them.
(d). Falling leaves, bark, helps to cover them.
(e). Winds blow dust over them.
(f). Rains wash dirt over them.
References:—
Story—"The Acorn's Friend."—Pop. Ed. Nov. '95, page 121.

VIII.

Study of a Dry Seed—Bean for Example.
(a). Notice the size.
(b). Notice the shape.
(c). Notice the color.
(d). Notice the outer coat.
(e). Notice the hilum or scar.
(f). Notice the micropyle or opening to adm moisture.
(g). Notice the ridge under which are the raphe tubes.
(h). Open the seed and find the young plantlet. This is the embryo between the cotyledons.
Note: It is not necessary to teach many botanical terms. Lead the children to see, to think, to experiment, and to draw correct conclusions.
References:—
Seeds—"The Fairy Land of Flowers," pages 9-55. Any Botany.

IX.

Study a Soaked Seed—Bean for Example.
(a). Remove outer coat, splitting opposite to scar.
(b). Slip the coat off the caulicle.
(c). Examine the hole from which the caulicle came.
(d). Notice the mieropyle.
(e). Inner coat.
(f). Caulicle.
(g). Plumule.
(h). How many cotyledons.
(i). What are the cotyledons for?
References:—
"Seeds—Structure, Growth and Germination,"—Jenkins and Kellog, pages 22-29.
"The Germination of the Bean," Pop. Ed., Feb. '97, 269-270.; Pop. Ed., Feb. '01, page 261.
"A Study of Germination," "Beans and Their Development," Prin. Ed., May, '97.

X.

Study other seeds the same way.

(a) Buckeye.
(b) Acorn.
(c) Pumpkin
(d) Peach.
(e) Etc., etc.

} *Mono di Poly* } *Cotyledonous*

References:—
"Horse Chestnut," Pop. Ed., Oct. '99, page 69.
"The Acorn," Cornell Teacher's Leaflet, No. 8.
"Seeds Study in October"—Prince Ed., Oct '98, page 323.
"Seed Journeys," The Child's World, Oct., 1901.

XI.

Collect Seeds and Vessels.
(a). Pollicle—columbine.
(b). Legume—pea.
(c). Silique—mustard.
(d). Silicle—shepherd's purse, pepper grass.
(e). Akene—butter cup.
(f). Cone—pine.
(g). Acorn—oak.
(h). Glans (nut)—hazel nut.
(i). Capsule—flax.
(j). Caryopsis—grains, grasses.
(k). Samara (wings)—elm.
(l). Pome—apple.
(m). Pepo—squash.

(n). Drupo—Cherry.
(o). Hesperidum—orange.
(p). Pyxis—berry, etc.
[Note:—Don't study all the above. Take your choice. See any botany].

References:—
"Nuts,"—Pop Ed., Dec., '96, page 173.
"Fruits"—Pop. Ed., Mar., '97, page 320.
"Nuts"—Birds and All Nature, Apr., '99, page 26.
"Nuts"—Birds and All Nature, Jan., '99, page 26.
"Lemon"—Birds and All Nature, Jan., '99, page 13.

XII

Germination.

(a). Notice the color of the cotyledons—effect of light.
(b). Caulicle appears.
(c). One part goes downward to form root.
(d). One part goes upward to form stem.
(e). Primary root sends off branch or secondary root.
(f). Do the cotyledons push their way out of ground? Why do cotyledons come "up?"
(g). If so what do they become?
(h). What was the use of the cotyledons? They were thick and fleshy.
(i). The food is exhausted, they are now thin and shriveled and have become the first pair of leaves.
(j). The plumule grows up.
(k). Second pair of leaves—compare with first.
(l). Root hairs on secondary roots.
(m). Root cap at end of primary and secondary roots.

References:—
"Jenkins and Kellogg," page 22.
"How a Squash Plant Gets Out of the Seed"—Cornell Teacher's Leaflet, No. 1.
"A Childern's Garden"—Cornell Teacher's Leaflet, No. 2.
"The Root"—Pop. Ed., Oct., '95, page 71.
"Something About Plant Roots."
"The Work of Root"—Intell., June 1, 1901, pages 427-428.
"Germination"—Pop. Ed., Feb. '97, page 269.
"A Study of Germination"—Prim. Ed., May, '97.
"Two Weeks With the Pine"—Prin. Ed., May, '95.
"The Root at Work"—Prin. Ed., May '95.
"The Brain of a Plant"—Pop. Ed., Feb., 1901.

XIII.

Experiments—Effects of Light.

(a). Grow a plant in the dark.
(b). Place a plant under a box, having a small opening about as high as the top of the plant. The plant will bend toward the opening.
(c). Measure the lifting power of the stem.
(d). Measure the pushing power of the root.
(e). Germinate a Winsor bean (horse bean) in Germinator No. 8 and turn the Welsbach chimney end for end frequently. Will the root grow up? Will the stem grow down?
(f). Obtain starch and glutton from wheat.
(g). Obtain starch from potatoes—Iodine Test for Starch.
(h). Get fibre from century plant, etc.
(i). Examine plants from market.

References:—
"Prof. Rattan."
"Woodworth's Nature Study Bulletin."
"Experiments With Seeds and Plants," Intell., Apr. 1, 1901.

XIV.

Germinators.

(a). Saucer with well soaked blotter—lay on the seeds and keep moist—not wet.
(b). Strawberry box with moist sawdust—plant the seeds—dig up as wanted for study.
(e). Currant box with soil, ditto.
(d). Four inch jar covered with netting or crinoline, partly filled with water; lay seeds in netting, cover lightly with wet cotton.
(e) Hot house—To see how the roots grow and root-hairs form, grow seed in water. Soak seeds over night—next morning place in "hot house" made by tying a piece of netting over a tumbler filled with water, placed in a saucer with a little water. Cover the whole with a jar, leaving a little ventilation.
(f). To watch the growth of seeds in soil—Place a piece of glass 6x8 inches on a piece of zinc 7x8 inches. Separate by strips of glass. Cement the whole together with water-proof cement. Fill space between the frame fine soil, and sow seeds in soil. Stand the frame on end to grow seeds and keep covered with a black cloth when not in use.
(g). Or tie two sheets of glass 6x8 inches together, with a thin strip of wood between them.
(h). Welsbach lamp chimney, with (or without) a lining of paper, filled with moist sawdust, the whole to be placed in a tumbler

References:—
"Jenkins and Kellogg."
"Rattan."
"Woodworth."

XV.

Seed planting—Vegetables.

(a). Radish—Plant in —— inches deep.
(b). Lettuce—Plant in —— inches deep.
(c). Onions—Plant in —— inches deep.
(d). Peas—Plant in —— inches deep.
(e). String Beans—Plant in —— inches deep.
(f). Squash (Summer)—Plant in —— inches deep.
(g). Beets—Plant in —— inches deep.
(h). Corn, etc.—Plant in —— inches deep.
Don't attempt too many or too much. Get good, fresh seed.

XVI.

Seed Planting—Flowers.

(a). Morning Glory—Plant in ——inches deep.
(b). Pinks—Plant in —— inches deep.
(c). Coleus—Plant in ——inches deep.
(d). Aster—Plant in——inches deep.
(e.) Zennia—Plant in ——inches deep.
(f). Cosmos—Plant in —— inches deep.
(g.) French Marigold—Plant in —— inches deep.
(h). Smilax—Plant in ——inches deep.
(i). Nasturtion—Plant in —— inches deep.
(j). Dahlia—Plant in —— inches deep.
Don't plant too many—don't attempt too much—good fresh seed.
(k). Sweet Peas.

Purple	Senator	E. Henderson
Waverly	Lavender	Queen of Eng.
D. Clarence	C. Radnor	Pink
Boreation.	D. Tennant	Penzance
Striped Purple	L. Eckford	Meteor
Gray friar	White	Splendor
Juanita	Bride	

Plant sweet peas 3 or 4 inches deep—from November 1st. Plant in double rows 5 or 6 inches apart east and west —double rows 12 inches apart.
The plants must be 5 or 6 inches apart each way.
Another authority says dig a trench 12 inches wide and 18 inches deep. Fill 4 inches with bones, soot, well rotted manure, leaves, sod, etc. Cover with soil to 4 inches more—8 inches in all—still being 12 inches below the surface. Now sow the seeds, covering 2 or 4 inches deep—fill in as they grow, being careful not to cover the crown of the plant.

References:—
"Ferns—To Raise from Spores."—Jenkins and Kellogg. page 120.
"Sweet Peas."—Prof. L. H. Bailey.

XVII.

Soil for Your Plants.

(a). Location—Sunny, shady.
(b). Heavy, light, sandy, loamy.
(c). Which are best for the seeds you are to grow?
(d). How deep to cultivate for the seeds you are to grow?

References:—
"Soils."—Cornell Nature Study Quarterly.

XVIII.

Culture of your plants.

(a). Weeding.
(b). Training.
(c). Pruning.

XIX.

Moisture.

(a). Conservation of moisture.

1.—Straw covering.
2.—Manure.
3.—Cultivation gives a loose, porous covering of earth —the best kind of a covering to keep in the moisture.

(b). Irrigation.

1.—How much—wheen needed.
2. How often—what time of day.
3.—How used—sprinkling or ditches? Which is best?

Reference:

"Moisture."—Cornell Nature Study Quarterly.

XX.

Cuttings.

Plant in November—Rose, etc.

Reference:

"Cornell Nature Study Quarterly No. 3."

XXI.

Bulbs, slips, tubers and roots.

Plant in November bulbs of oxalis, freesia, hyacinth, crocus, etc.

Reference:

"Bulb Garden."—Cornell Nature Study Quarterly No. 2
Root geranium slips in water and earth.
Root rose slips in earth.
Plant onion sets.
Plant roots of sweet potato.

XXII.

Budding.

Bud a rose bush on school grounds.

References:—

Cornell Nature Study Quarterly No. 3.
"Year Book—Agricultural Department."

XXII.

Grafting.

Show how to graft by using twigs.

References:—

Cornell Nature Study Quarterly No. 3. "
"Year books—Agricultural Department."

XXIV.

Transplanting—Cabbage, lettuce, etc.

Plant deep and press the soil firmly around the roots. Keep the surface well loosened up to prevent too rapid evaporation of moisture,—and to more readily absorb moisture from the atmosphere.

• Stir the soil after rain to prevent caking and baking.

Note:—The above course is intended to be simply suggestive. If properly handled its relations to manual training and esthetic education may be brought out by:

1.—Planting, cultivating, grafting, budding, etc., by the pupils.
2.—Obtaining fiber from plants and making things of it; useful and ornamental.
3.—Drawing flowers, fruits and seeds.

The following Syllabus may prove serviceable:

- Endogens
  - Food
    - Beans (peas, locust, lupine, etc.).
    - Fruits (all of the common varities).
    - Cabbage (turnips, radish, cauliflower, kale, mustard, water cress, etc.).
    - Tomato.
    - Lettuce.
    - Potato.
    - Cucumber.
    - Squash.
    - Watermelon.
  - Fiber
    - Cotton.
    - Hemp.
    - Flax.
  - Ornament—Most of the common flowers.
- Exogens
  - Food
    - —Asparagus (see ornamental plants).
    - Date, pineapple, banana.
    - Corn (wheat, oats, barley, broomcorn, Sorgham, Kaffir-corn, sugar-cane).
    - Onions (leeks, chives, garlick, see ornamental plants).
  - Fiber
    - Banana leaves (Manila hemp).
    - New Zealand flax.
    - Pineapple leaves.
  - Ornament
    - Bulbs, asparagus.
    - Century plant.
    - Yucca.

Report of Committee on Course in Nature Study.

I.

GENERAL INSTRUCTIONS.

The aim of Nature Study in the training of the child is to secure accurate observation for the purpose of securing data for thought, and secondly, clear thinking upon the data. Inasmuch as the mind acts as a unit, and not as a system of faculties, the two processes, that of an accurate use of the senses and clear thinking, go on together. The aim then is to secure thoughtful observation and, with the younger children, this is to be made as spontaneous as possible. In general the time spent daily upon the subject should be short, and not too much at anyone lesson attempted. Field lessons should occur often.

A great deal of interest is added to the work in Nature Study by the formation of a miscellaneous collection to be made by pupils. This will include all lines from insects to minerals. Woods, flowers, Indian and other relics may be utilized. This collection can be allowed to slowly increase until almost every animal, flower, insect and mineral in the neighborhood is represented. Seeds and grains may also be added. The following papers from the Smithsonian Institute, Washington, will be found valuable in aiding this work: Parts A, C, E, F and G, of the U. S. National Museum Bulletin, No. 39. These may be obtained from the Smithsonian Institute through our Representative in Congress at Washington.

II.

ANIMAL LIFE .

The first aim in teaching animal life should be to produce an environment in and about the school in which animals, insects, etc., will live naturally. This can be done through the following Media:

(1). Aquaria.
(2). Breeding cages for insects.
(3). Aviaries.
(4). Plants in school room upon which insects thrive.
(5). Plants, herbs and trees on the school grounds upon which insects thrive and birds feed and live.

Books for references:

Animal Life—Jenkin's and Kellogg.
Studies in Entomology—Bland.

The study of animal life is naturally most pleasing sub-

ject to children, for it is so familiar to them and begins with their earliest remembrance. Every child has a pet cat which affords amusement and companionship. The old family dog has been a constant companion, the carriage horse that has been such a faithful servant, the chickens which children love to feed, the rabbits, the pigeons, the canary bird, and the beautiful butterflies that flit from place to place—all these have been carefully noticed by children and their points of resemblance, their habits, methods of obtaining food, etc., have been observed. Thus we find that children have a better start in animal study than anything else. Nothing interests them more than to see new animals and learn their habits, etc. How eagerly a boy will examine a new animal book, and how many questions he will ask you. The subject never grows wearisome to him.

It is true that to outline a course in Nature Study for all places would be a difficult matter, but any teacher can find plenty of material to work with. No matter in what locality he may be, the effort and the enthusiasm raised all lie within the reach of the teacher. He must use careful judgment in selecting things to work with which can be obtained at the right season of the year, and also in plentiful number. He must always have a separate specimen for each pupil, if possible, especially if the object be small.

In the insect world there is an abundant field in any locality. Metamosphosis is a most wonderful thing to a child. Insect eggs can be found in spring and summer. Collect some of the eggs and watch them hatch. The larvae or caterpillars, can be secured and fed and observed to pupate. Collect some of the cocoons and watch them develop. Make an aquarium out of a battery jar; place in it some of the characteristic creek vegetation, then in late spring or early summer secure some mosquito eggs and watch the metamosphosis. The same can be done with frogs and toads, as their eggs are easily obtained in spring, whether it be in the cold clear mountain stream or the slow running almost stagnant pool of the valley. In the orchard districts the cottony cushion scale makes an interesting study, and in the orange groves one can find excellent study in the red orange scale. Bees form a good subject; they are found in all localities, and their industrious habits tend toward developing in the child a regard for work. What makes the bee go from flower to flower? Does he do the flower any good? A nest of ants forms an interesting study. The ant as a warrior, as a worker, as a builder of roads, as a slave owner, makes excellent observation lessons. Bettles can be taken up with much profit. Learn some of those that are useful to man, such as lady birds, and those that are enemies of the vegetable, as the squash bug.

The earth worms form also a good study. They are easily obtained and easily kept. Put a half dozen in an old chalk-box filled with dirt. Observe how they burrow, their sensitiveness to light, whether they come out of their borrows at night or in the day. Put bits of food or leaves on the surface and watch them disappear. A gopher or a mole can be kept and the habits of the animal observed. Are these animals useful to man? Have they any good habits?

Birds abound in all sections of the country. Divide them into two classes, the flesh eater and non-flesh eating. What are their characteristics? Are the flesh eaters useful to man? How? The same can be developed with the other classes? Which birds are enemies to other birds? How are the nests made? Of what materials? The number of eggs laid? How long for them to hatch? Color, size and marking of the eggs? Some boy will be sure to have a collection of birds' eggs, and he will be glad to bring them to school to show to the class.

Squirrels are found in all localities. In the valley, the common ground squirrel is very plentiful, too plentiful for the farmer, in fact, and in the mountains the beautiful gray squire is still found.

Those who live near the sea-shore have an abundance of material to select from, the star fish, the sea urchin, the sea-anemone, crabs, shelled animals, fish, etc.

In your work in animal study, do not confine yourself to one class wholly, but lead the child to see and observe insects, vertbrates, shelled animals, in fact, that which is nearest and best. Abouve all try to teach him to think, for thinking developes brain power, and brain power fits one to cope with life's problems. This work need not be left when the lesson in animal work is concluded, use it in conjunction with language, as it serves as an excellent subject material which children can use, that is interesting to them.

III.

Lessons in Nature Study on Non-Living Phenomena.

The following subjects are well adapted for lessons in Nature Study on non-living phenomena as they are simple enough to allow the seeing of facts and the drawing of conclusions from them. References are given with each of those which will be helpful to those desiring aid.

Conduction—Harrington, p. 11 and 113; Jackman, p. 154.

Expansion of Solids—Jenkins & Kellogg, p. 85; Harrington, p. 110; Jackman, p. 111.

Expansion of Gases—Jenkins & Kellogg, p. 83.

Expansion of Liquids—Jenkins & Kellogg, p. 81; Harrington, p. 110; Jackman, p. 112.

Currents in Air and Water—Jenkins & Kellogg, p. 87; Harrington, p. 112; Jackman, p. 155.

Thermometer.

Evaporation—Jenkins & Kellogg, p. 91; Jackman, p. 82.

Condensation—Jenkins & Kellogg, p. 93; Jackman, p. 84.

Boiling—Jenkins & Kellogg, p. 92; Jackman, p. 82.

Pressure of Air—Jenkins & Kellogg, p. 171; Harrington, p. 191.

Pressure of Water—Jenkins & Kellogg, p. 171; Harrington, p. 47; Jackman, p. 36.

Bouyancy—Jenkins & Kellogg, p. 171; Jackman, p. 234.

Barometer.

Pumps—Harrington, p. 53.

Pendulum—Jenkins & Kellogg, p. 161; Harrington, p. 31; Jackman, p. 195.

Magnestism—Harrington, p. 65; Jackman, p. 43.

Preparation, Properties, use and Application to Human and Plant life—

Oxygen—Jenkins & Kellogg, p. 149; Jackman, 159.

Carbonic Acid—Jenkins & Kellogg, p. 149.

Study of Candle Flame—Jenkins & Kellogg, p. 154.

Books for Reference:

"Lessons In Nature Study," by Jenkins & Kellogg.

"Physics For Grammar Schools," by G. C. L. Harrington.

"Nature Study," Jackman.

The literature of what may be termed the laboratory method of teaching geography is rapidly increasing. "The Journal Geography" (an illustrated monthly published at Lancaster, Pennsylvania; $1.50 per year), will keep one in touch with the new books and the recent thought in this line. On our coast, Dr. Fairbanks' little books "Stories of Our Mother Earth" and "Home Geography" for primary grades are to be highly recommended. "Stories of Our Mother Earth," deals especially with California scenery and is very interesting reading for pupils in the upper grades and for teachers. Dr. Fairbanks is preparing a California supplement to the Tarr & McMurry geographies, which ought to be exceedingly valuable. It is expected that this will be ready for the fall term.

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