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THE SCHOOL GARDEN IN THE COURSE OF STUDY

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School gardens and elementary school agriculture are often considered as mere phases of the great subject of Nature-Study, meaning by this term—"the observational study of common objects and activities from the standpoint of human interest in our every day lives." But the school garden, on the one hand, has certain intrinsic values which cause it to appeal to pupils, teachers and patrons, while agriculture, on the other hand, as a grammar grade subject is rapidly being incorporated into county courses of study throughout this State.

Garden work has well been called a fundamental prerequisite to real nature-study. Much of the nature-teaching can be done in connection with the garden. It may prepare for and grow out of the gardening processes and experience. Moreover, the garden offers the best opportunity to start nature study. It is definite and of necessity brings the child into touch with natural objects and forces. It should be the center from which radiate various lines of work. "Instead of insects, birds, weeds, soils, etc., as isolated topics, they should be taken up in connection with the plants with which they are biologically and economically related."* At the same time the garden work can be correlated with all the regular subjects. Best of all it makes for character building through emphasis of individual responsibility and practical ethics.

Agriculture has been adopted as a grammar grade subject in many counties of California. But, owing to the lack of a definite, progressive plan of garden work, the study of agriculture has amounted to little more than the reading of supplementary texts. Grammar grade agriculture should build upon and supplement the nature-study of the primary grades and the school garden should furnish the actual basis of the work throughout the whole course.

* Coulter-Patterson, "Practical Nature Study," Appletons.

The chief aim and business of nature-study in the lower primary grades is the gathering of precepts, the getting of experience, with as many different objects in nature as possible, to know their names and something of their relations to each other and to man. So with garden work here. The *first grade* children can profitably spend some periods in the garden, watching the older children at work, learning the names of tools, seeds and plants. But a little space should always be reserved for the special work of the first grade. Class exercises may consist of planting bulbs in the fall and in the spring a bed of sunflowers and a row of popcorn. These will furnish good material for life history studies. The sunflower seeds will attract birds as they ripen and the popcorn can be used at Thanksgiving time.

Second grade children should have some individual garden work if possible. Plots not smaller than 3 by 5 feet for one or two pupils will allow the cultivation of one vegetable and one flower. These should be large-seeded and quick-growing like peas, string-beans, radish, nasturtiums, zinnias and four-o-clocks. Teach by demonstration lessons requiring them to repeat what they have seen you do. Use earliest maturing varieties. Gather for use at school or home. Save seeds.

In the *third grade* we usually find Home Geography called for. In connection with this what could be more helpful than to have the children learn to grow some of the food crops that are raised "around home" and perhaps some desirable ones that are not commonly grown or, if common, not always well grown? For example, our old friend, the lettuce, is all too frequently sown thick and broadcast and thinned only as some is needed for the table. But it is very little trouble to transplant and then it can be set far enough apart so it will head and so produce the same kind of lettuce we buy in the market. This crop is quickly grown. Yet it gives the practice in transplanting and, with this mastered in the fall, the following spring many of the more difficult vegetables can be handled, such as cabbage, cauliflower, and kohl rabi, tomatoes, peppers and egg plant, besides such small seeded flowers as pansies, asters, and cosmos. The third grade pupils should have good stiff practice in preparing the seed bed or boxes, sowing, watering, transplanting and cultivating their crops. Community work may consist of some effort at beautifying the school yard, keeping it clean, planting something ornamental, subject to the fundamental principles of landscape art which the teacher should understand.*

* Consult Bailey's "Manual of Gardening." Macmillans.

In the *fourth grade* special attention should be given to the economic phase. Food and fiber plants other than those produced at their homes should be grown in community plots—cotton and flax, mulberry trees, field crops like potato, wheat, sugar beets, etc. The sugar beets can be pulled, cleaned, topped, sliced and stewed to extract the sugar and water evaporated so as to show the sugar present. In a grain region the leading cereals should be grown and for this purpose the Experiment Station at Berkeley will furnish free seed. In the individual gardens some one crop should be so well grown that the produce can be marketed. With a little encouragement many children will do this at home to the great delight of their parents and with the preparation suggested in the second and third grades they ought to succeed. In case this is undertaken at home, the individual plots at school may be used for practice in propagation by bulbs and tubers. Freesias, gladiolus, dahlias and onions can be raised from the seed and the young bulbs saved. Transplant native bulbs from the wild. The garden can be made to vitalize the geography study of these grades.

In the *fifth grade* we come to a period where the nature-study work has usually frittered out. In order to avoid this weakness it is well to intensify on one or two important lines. The topics of greatest interest and value to the pupils are trees and birds. The two go naturally together and, while they should be included in the miscellaneous studies of earlier years, fifth grade boys and girls are capable of and take more interest in such intensive study. Pinchot's "Primer of Forestry" can be secured from the Secretary of Agriculture, Washington, D. C., in two parts as Farmers' Bulletins 173 and 358 in numbers sufficient for class use. For the teacher Fernow's "Care of Trees" will be a most useful help.

Best of all, the garden can furnish the introduction and basis for this tree study. With the preparation they will have had in the lower grades, or even without it, if the teacher understands the essentials to success, these boys and girls can successfully raise many of our common and some of our rare trees and shrubs *from the seed* or from cuttings. Work of this kind will be more valuable to them than all the field trips and class room work. It is one thing to read about conservation. It is quite another thing to plant an acorn or a pine seed and care for the growing tree through the years. Arbor Day is all too often a farce, but tree growing and tree study as a fifth grade study will give an intelligent appreciation of what it means to produce forests and the value of individual trees. (See "Tree Growing

in the Public Schools," Circular 59, Agricultural Experiment Station, Berkeley.)

It will be necessary to conduct the tree growing as a class exercise, the teacher giving directions and demonstrations which the pupils carry out. Individual plots can be used later in the season for growing the seedling trees. In the fall the young bulbs raised during the previous year should be planted and brought into bloom. The life history of biennials should be worked out by planting beets, turnips or cabbages that have been stored. Sometimes these and others like salsify are left in the ground from the previous year. They should be cared for and studied when they come into bloom and the seed saved.

Whenever seed is saved in this or earlier years, the fundamental principle in plant improvement—selection of seed from *superior individuals*—should be emphasized. (See Chapter IX in Hilgard and Osterhout's text.)

In the *sixth grade* pupils should perform some school room experiments on the plant as a living machine and the conditions necessary for its success; conditions necessary for the germination of seeds, the soil, what it is, and what is going on in it, and the relation between the plant and the soil. Simple experiments are now devised for teaching these things in the elementary school. They are set forth in their relation to agriculture in the first few chapters of "Agriculture for Schools of the Pacific Slope" by Hilgard and Osterhout. In schools where there has been no garden, such a series of experiments form the best preparation for the garden work of the grammar grade pupils.

When garden work has been introduced in the lower grades already, the work of the sixth grade may center on more difficult phases of plant propagation. The art of propagating plants from seeds, bulbs, cuttings, and buds is a fascinating subject to old and young and children seldom tire of the simple experiments that can be devised in order to answer the questions which their own curiosity will prompt them to ask.

In any previous gardening, the class will have begun to learn the art of *seedage* in its simpler phases, but there is much more that can be learned to advantage. The preparations for starting a school nursery will introduce new problems. At this point, explain the reason for growing budded or grafted fruit and nut trees. Make a seed bed and stratify the seeds of stone fruits, pome fruits, walnuts, etc., during fall or winter. When the seeds begin to sprout plant them about six inches apart in the nursery row and bud them in June or Septem-

ber. In case of failure to make buds "take" the tree can be used again the following spring or fall. Any of the texts on agriculture give simple directions for budding and grafting, and Bailey's "Manual of Gardening" gives full details. When the budded trees have made a year's growth give each pupil a tree to take home. Establish a custom in the school.

The growing of bulbs from the seed has been suggested for the fourth grade. The cutting of hyacinth and lily bulbs so as to secure young bulbs or offsets will prove interesting. A single scale from a lily bulb will form small bulblets when planted in rather dry soil. Hyacinth and tulip bulbs may be cut in two or slashed in various ways and planted again. This should be done during spring or summer after flowering.

The hotbed and cold frame will furnish much good practice,—making and caring for them, including watering and ventilating; raising early cabbage, tomato and pansy plants, etc. Then these same frames may be used for a detailed study of soft and hard wood cuttings of rose, heliotrope, fuchsia, etc. Cuttings of grapes, currants and other bush fruits may be "heeled in" in the cold frame until callus forms. Directions for making cold frames, hotbeds, etc., will be found in Bailey's "Manual of Gardening," which is the most useful general reference book on gardening for the school library. MacMillans, $2.

Seventh and eighth grade pupils should grow more difficult vegetables such as asparagus, rhubarb, celery, sweet potato, and flowers such as petunias, begonias, gloxinias, for all of which the hot bed and cold frame will be useful.

The element of doing should still predominate and pupils should depend on their gardens or other experiments for data. Problem experiments connected with crop production—best methods of irrigation and cultivation; individual work in crop improvement including seed selection (see Circular 46, Agricultural Experiment Station, pp. 21 and 26, also Hilgard and Osterhout's text, Chapter IX). Quantitative work based upon plot dimensions—area expressed in fractions of an acre, rate of application of fertilizers in plot experiments, amount of products in weight, estimated yield per acre, gross and net returns, etc.

Distinct problems for boys and girls should be planned. For example, the boys may choose special problems in the culture of farm crops and the girls, problems connected with landscaping home or school grounds, the planning and planting of groups, borders and ornamental beds.

The course outlined above is progressive from grade to grade and so is adapted only to larger schools. Smaller schools will be compelled to handle the pupils in groups making the garden work progressive from year to year in those groups. The following scheme is suggested:

Group I. Work suggested above for grades 1-3.
Group II. Work suggested above for grades 4 and 5.
Group III. Work suggested above for grades 6-8.

"This organization of material unifies and increases its value from an educational standpoint. Indeed, if the full purpose of the garden work is carried out, it means more than the training of the hand in doing its part of the work successfully and skillfully. It means a training of the eye to see things as they are, a training of the mind to think logically and independently, to draw truthful conclusions and to recognize the dignity of the work."*

Many schools wish to begin the teaching of agriculture in the grammar grades even though the pupils have had no previous nature-study or garden experience. It should be remembered that the large aims of agriculture in the elementary school are threefold (1) to create a sympathy for farming, for country life; (2) to give new direction to many of the old subjects in the curriculum; (3) to link school and community life. The scope of these aims is far reaching, for agriculture, with the school garden as a basis, is potential in the direction of all those factors which make for good citizenship and happiness.

Agriculture in the large sense does not mean merely the growing of a field crop, but it means bird life, insect life, weather conditions and other factors in relation to the field crop. Thus the great majority of teachers, whose lives have been far removed from these natural agencies, hesitate to attempt the teaching of agriculture although they feel its need. They are timid because of the lack of knowledge and naturally they ask, "How shall I teach agriculture." One of the delights in teaching is to discover and to learn with the children. As to the method of introduction, use the school garden, or if such is impossible, let the children start home gardens. Link the school life to that of the community. Observe the needs of the community, the school and its yard and let this observation direct the work in agriculture in a great measure. If a fresh lawn is needed at school let the children put it in, etc. Again the work of the community may well give direction to the gardening. A rural school situated in a fruit district should devote space to a nursery, etc. For the guidance of the teacher and supplementary reading in class, use Hilgard and Osterhout's "Agriculture for Schools of the Pacific Slope."

* Coulter-Patterson "Practical Nature-Study."

COURSE OF STUDY FOR SIXTH, SEVENTH AND EIGHTH GRADES

Sixth Grade—Fall Term

The Soil:

a) Characteristics of sand, clay, humus.
b) How to better soil conditions.
c) The relation of water to sand, clay and humus.
d) How to conserve capillary and gravitational water.

The Seed:

a. What is a seed?
b. The needs of the embryo plant.

The subjects should be taught by class-room experiments set up by the teacher or by the pupils. The aim of the experimental work should be to direct conduct in the garden, to teach the children *how to better the soil conditions; how to prepare the seedbed; how to plant seeds; how to care for the young plants.*

If the water conditions are such as to permit irrigation, start the gardens in the fall term. Select a plot, soak with water, and lay out the gardens. Make the individual plots about 4 by 6 feet. (For further suggestions see "Suggestions for Garden Work in California Schools," Circular 46, Agricultural Experiment Station, Berkeley.)

Grow the common vegetables and flowers.

Vegetables: Raddish, lettuce, beets, carrots, parsley, turnips.

Flowers: Sweet Alyssum, cosmos, poppies, sweet peas. Start pansies, stocks, coreposis, etc., in boxes to transplant later.

After the first preliminary lessons to teach the children how to prepare a seed bed and how to plant their seeds, experimental studies should be sacrificed for garden work. However, as the gardens come to need less attention, study in the class-room and in the field may be resumed.

The work of the stem:

a) As a piping system to convey food and water to the roots and to the leaves.
b) To lift the leaves to the sunlight.
c) To lift the flower high for pollination and to insure a wider field for the dispersal of the seeds.
d) As a storehouse for food as in celery.

The work of the leaves:

a) As a respiratory system of plants.
b) As a means of protection from excessive heat.
c) As a factor to control loss of moisture.
d) As a soil builder.
e) As a storehouse for food as in lettuce.

The work of the flower:

a) To perpetuate the plant.
   1. Pollination.
      a. Self fertilization.
      b. Cross fertilization.

Seed dispersal.

SPRING TERM

If the gardens were started in the fall, carry them through the spring term, otherwise, as early as possible get them under way. Plant vegetables and flowers.

Vegetables: Peas, beans (after frosts are over), potatoes, cabbage, tomatoes.

Flowers: Transplant those started in boxes or hot beds. Sow in the open, nasturtium, zinnia, larkspur, etc., arranging for some color scheme.

Grow economic plants—sugar beets, flax, hemp, castor beans, cereals, etc.

Continue plant study as outlined in the fall term covering chapters I-X in Hilgard and Osterhout's book, emphasizing the experimental work.

Seventh Grade—Fall Term

The gardens will need immediate attention. If they have not been taken care of during the summer vaction by the children or the janitor, they will be overrun with weeds and many harmful insects will be at work. As the children meet these new factors they should be studied. For suggestions see the text recommended.

Without a break in the continuity of the whole subject, birds should be studied as a natural check on insect life. Teach the children to recognize the winter visitors which arrive in the fall. See "A Guide to the Birds of the Pacific Coast" by C. A. Stebbins, Berkeley, California.

Harvest the economic plants. See the text for suggestions as to methods used in obtaining sugar from the sugar-beet, fiber from the hemp and flax, etc. The work with the economic plants points the way to a study of the work of the world.

Lay aside a strip of the garden for a nursery. Plant peach and almond pits. Start apple trees from seeds or "piece roots." See "Tree Growing in the Public Schools," Circular No. 59, Agricultural Experiment Station, Berkeley. This material will furnish studies of plant propagation in the eighth grade.

Spring Term

Keep the gardens under way. Plant vegetables and flowers from a new point of view. Many uses may be made of the garden output:

(1) it may be eaten at school, (2) it may be taken home and given to parents, (3) it may be given to the poor, (4) it may be used for a school vegetable dinner, (5) it may be entered in exhibits. The great value of competitive exhibits at school or local, county or district fairs should not be overlooked. Award useful prizes.

Eighth Grade—Fall Term

Propagation of plants.

a) By budding and grafting (using the seedlings planted the year previous.)
b) By seeds.
c) By cuttings—roses, geraniums, grapes, currants, fig.
d) By layering—blackberries, raspberries, etc.
e) By tubers—dahlia, iris, potato.
f) By bulbs—lilies, hyacinths.

The children should take part in doing the work suggested above. Study the weather in relation to plant life. See the text. The young seedlings are likely to be attacked by fungus diseases and certain insects. The control of these factors should receive careful study. Continue the study of birds.

Spring Term

Keep the gardens under way, following a graded schedule for vegetables and flowers in order that experience may be obtained in growing the different types of plants. The pupils may assist in making a planting chart for the locality.

In relation to necessary agencies for plant growth, study bacteria in order to direct the conduct of the children toward better living. See the text for suggestions.

Study the earthworm and such other low forms of animal life as are related to the welfare of the soil and to mankind.

The course as outlined is very general. The chief aim has been to show the relation of the school garden to the class-room work.

CALIFORNIA JUNIOR GARDENERS

This is the name for an organization of the grammar grade pupils of California who are engaged in gardening. The College of Agriculture publishes a paper twice each month during the school year, called "The Junior Agriculturist." It will be sent free to any grammar grade boy or girl in the State who has a garden. Teachers will find this paper an excellent means for interesting their pupils in the agricultural work.

To give some idea of this publication, we herewith reproduce the following sample pages:

University of California, College of Agriculture, Berkeley, California.
E. J. WICKSON, Dean.

The Junior Agriculturist

A LITTLE PAPER ISSUED TWICE A MONTH
FOR THE BOYS AND GIRLS OF CALIFORNIA

Vol. 1 Berkeley, California, APRIL 15, 1911. No. 4

Communications should be sent to
C. A. STEBBINS, Editor
Berkeley, Calif.
Agricultural Education Division.

During the month of March, we visited a class of blind children twice to teach them about our song birds. These poor children have a great deal of joy shut out of their lives. You would think it a great hardship to have to be blindfolded one day.

The first day we told them about the habits of the birds showing them how much value they are in helping to control the destructive insects. The stuffed skins of the birds, which many of you have seen, were then handled by the children.

On the second day we all went out into the fields. When a bird sang, the children were told its name and were allowed to handle the stuffed skin of a similar bird. Thus they learned the songs of eight different birds. At our next visit, the children will remember these birds, even better than you would.

The next time your tooth aches or something else goes wrong just think of these blind children and be thankful that your troubles are so small in comparison.

* * *

We wish to tell the Berkeley gardeners that four banners have been ordered. Two to be used as rewards to the two groups having the best gardens on the University campus and two to go to the two best individual gardens. Each gardening day the gardens will be judged and the banners will be flown in their proper places. They will remain there from day to day so long as these gardens are the best. However, if on succeeding days other gardens are judged the best, the banners will be flown in their new places. Thus it will not only take work to win a banner but it will take work to keep it.

The banners have arrived since the above was written. Mr. Baird's and Miss Van Mater's children received the banners for the first and second best groups. For the best individual garden banners were given to Joseph Hooker and Roscoe Scammon.

* * *

At the present writing we think the gardens at the Niles school are the best. The boys have built a fence around the plot. The gardens are uniformly laid out, raised about three inches, and are producing a fine growth of vegetables. We are going to have a picture of the gardens in the "Junior" before long.

Some day if a big auto-truck rolls up to your school filled with children, greet them as gardeners from Niles, for seventeen of them are planning to rent such a car so as to visit the other school gardens of Alameda County. We like this idea. The children of Niles are "up-to-date."

* * *

The Decoto gardeners have made a large cardboard bird chart. Columns have been made for (1) the name of the bird, (2) when seen, (3) winter, permanent, or summer resident, or transient, (4) where it nests, (5) kind of food, (6) protected or unprotected, (7) name of the pupil who sees the bird first, (8) time of arrival or leaving.

Several "summer residents" have just arrived, (1) the russet-backed thrush, (2) the plain tit-mouse, (3) the chipping sparrow, (4) the black-headed grosbeak. We think the varied thrushes have gone north.

* * *

One class at San Lorenzo is putting in a lawn in front of the school house. The fifth grade chidren are growing flowers and geraniums to place about the building besides growing vegetables in their gardens.

If nothing happens the "California Junior Pins" will be ready for distribution before long. They are going to be given to you.

* * *

The Seed

A seed is an embryo plant provided with food, usually, and a cover. The embryo sleeps within its cover until awakened by moisture. The moisture is necessary in order to carry food to the small plant. We learned in the previous lesson that there is moisture in the soil, so it follows that the first effort of the seed is to bury itself. Observe a seed closely and you may see that its shape is such that it may readily, with the help of winds and rains, work its way into the soil. Many seeds have mechanical arrangements which aid in burying them. Alfilaria seeds have a screw-like attachment which helps them to work into the soil and into your clothing. The fox-tail has seeds which penetrate your clothes very readily. Birds help to bury seeds.

With the seed buried by nature or by man, the water enters a little opening in the seed called the micropyle. This moisture sets up action in the seed, sugar is made, and more water is drawn through the seed cover. The experiment which most of you have seen with the walnut shells taught you this. The cover which up to this time has been helpful to the seed is now a hindrance and the seed tries to rid itself of its coat. Finally, the cover splits and the little plant pushes its way, a part upward to become the stem and leaves, a part downward to become the roots. The plumule becomes the stem and leaves, the radicle becomes the roots.

In order to form roots and leaves, food is necessary. The chick comes from the egg and runs about immediately to find its food. The little plant cannot do this so nature has placed its food close at hand, in the seed leaves, or cotyledons. In the case of the bean the seed draws for a long time on the seed food, sometimes until the plant is four or six inches high. By this time the roots have formed and have begun to draw upon the soil for mineral food, the leaves have begun using the air for food. The pansy seed has very little plant food for its embryo. The bean has a great deal. These facts tell us something about the depth to plant seeds. The small seed planted deep would not furnish the embryo enough food to help it to the sunlight. We know a general rule to use in planting seeds. It is, plant seeds as deep in the ground as three to five times their diameter. Seeds should always be planted deep enough to rest in moist soil, regardless of the rule. We have seen children plant seeds in dry soil. Since moisture is essential to plant growth, no results can, thus, be obtained. Large seeds may be hurried in germination by soaking in water the night before planting. Often good results may be obtained by digging the row for the seeds, by filling with water, and after the water has soaked in, by sowing the seeds in the trench.

We hope that you have remembered tnat plants are grouped into classes by the number of their cotyledons. For instance, monocotyledons are plants having one cotyledon, such as corn; dicotyledons have two seed leaves, the bean; polycotyledons have many cotyledons, the pines.

* * *

Questions

1. What is a seed?
2. What awakens the seed?
3. How does the seed bury itself?
4. How does the water first enter the seed?
5. What happens when water first enters the seed?
6. What does the seed try to do with its coat?
7. Where is the food stored for the small plant?
8. What is the rule for planting seeds? What determines this rule?
9. How may germination be hurried?
10. How are plants grouped?

Many of our gardeners will recognize that some of the material found in the last two numbers of the "Junior" reviews the lessons given by the student teachers. This plan is going to help you to remember what is taught you.

* * *

CHILDREN'S ARTICLES

How Deep to Plant Seeds

Gardening is very interesting for me. I have always planted my things so deep in the ground that they never succeeded in coming up. I have learned now how far down to plant seeds. We had an experiment and quite far down we planted a seed and a little higher up another until we planted another seed in the right place. The one in the right place is quite high now. The others are still struggling to get up to the light. I

remember one time I had some very nice seeds and I went out and dug a great hole and dropped them in. It is over a year now and I have had nothing from my seeds. I have learned how far down to plant my seeds and the next time I shall know and may be I shall have some flowers. I have learned the rule which is to plant the seed from three to five times the smallest diameter.

MELIA FARWELL.

High 5th Grade. Oakland.

* * *

Plants Need Light

To be sure that a plant needed light, we tried an experiment in our class room. We had made a small garden in a box. We put a cardboard box over a pea plant. The box kept the light from the plant. About two weeks after we took it off to see what the result was. The plant had turned yellow. The other plants that did not have any box over them were green. This experiment shows that a plant needs light.

VERNA JEFFERY.

5th Grade, Washington School,
Oakland.

* * *

Plants Need Heat

The plants need heat. If you plant some seeds in the shade and then plant some in the sun you will find that the one you put in the sun will come up first. We proved this by planting some seeds in two cans. We put one away from the sun and one in the sun. The one in the sun is lots larger than the other one.

JAMES REED.

A 5th Grade. Oakland.

Possibly the presence of more light had more to do with rapid growth than the difference in heat. This experiment hardly proves that heat was the controlling factor alone.

* * *

A Seed

A seed is a tiny plant surrounded by food. It needs plenty of air, moisture, heat and good soil. The parts of a seed are the coat, micropyle, cotyledons and embryo. In showing how the seed needed air we tied some seeds in cotton and put them into a bottle with water, then we put in the cork to shut out the air. Then we took a glass and put some cotton and seeds into it with a little water and did not shut out the air. The ones we put into a glass have come up very well, and are green, and the one we put in the bottle is not sprouted, so that showed that a seed needs air. This tells us that soil must be prepared so that seeds will get air.

HOPE REIGNER.

B 5th Grade. Oakland.

* * *

My Garden

One corner of our school yard about fifty feet long and thirty feet wide, has been set aside for our vegetable garden.

Some of the boys divided it into twenty-five garden plots, each eight feet long and five feet wide, with a path two feet wide on three sides.

Each of us has chosen one of these plots for his own garden which he must dig, plant and take care of.

We had just begun digging when the rain came along and made us stop.

I am going to plant radish, lettuce, and peas in my garden. I know I shall enjoy taking care of it and watching the plants grow.

When our plants are grown we are going to exhibit them.

JOSIE ANDERSON.

San Leandro School.