

# CHRISTIAN EDUCATOR

A MAGAZINE FOR HOME AND SCHOOL

Vol. IX

February, 1918

No. 6

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Published Monthly by the

REVIEW AND HERALD PUBLISHING ASSOCIATION

Washington, D. C.

THE SCHOOL OF OPPORTUNITY

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Emmanuel Missionary  
College

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*First Things First*

Berrien Springs

- - -

Michigan

## BACK TO THE LAND

“The heaven, even the heavens are the Lord’s, but the earth hath he given to the children of men.”

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“And the Lord planted a garden . . . and there he put the man whom he had formed.”

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“The same God who guides the planets works in the fruit orchard and in the vegetable garden.”

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“It is through God’s immediate agency that every bud bursts into blossom.”



EVERYTHING FROM THE EARTH

This cartoon appeared in a recent metropolitan daily as a reflection from the agricultural and garden movement forecast for the coming season. An editorial says of it: “Man works, nature drives. Man’s intelligence, the soil’s fertility, and the wealth of mines give us everything.”

“Five acres under intensive cultivation is as much as half a dozen men can attend to properly.”

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“There are a hundred ways of being comfortable, happy, and successful in the country. Pick out one of the hundred ways and stick to it.”



UNION COLLEGE PRIZE WINNERS

Part of the cows that took 16 ribbons at the Nebraska State Fair. The first gave over 1,500 gallons of milk in a year. The two others took prizes in a butter contest of all breeds.



WALLA WALLA COLLEGE CHAMPIONS

Part of a herd of thirty registered Holsteins owned by the College. Two of these stood at the head of a list of 36 selected Washington cows in an official test.



COLLEGE KING SĒGIS ALCARTRA

Head of Union College herd. His sire valued at \$50,000, his dam a former world's champion producing 35.61 pounds of butter in 7 days.



HIGHLAND DORA VREEMAN

State champion in producing butter-fat, owned by Walla Walla College. Record for one month 329 pounds milk, 81.5 pounds butter-fat.

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VOL. IX

WASHINGTON, D. C., FEBRUARY, 1918

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## A PARABLE AND A MIRACLE

NO element in the Master's teaching appeals more to the teacher of today than the parable. A parable is a lesson in the concrete. It is illustrative, easily interpreted, often self-explanatory. Excellent, O teacher! But here is something still better—a *living* parable: "The school farm is to become a living parable to the students." This parable is by the same Author, but it is not a story, it is a *reality*. Is it so to you? Are you using it as such? How pitiable if you have no farm, no garden, no flower bed—no living parable from which to draw lessons in your work!

But the Master did more than teach. He also *did*—did miracles. The miracle was a short cut to results: water to wine, leprosy to soundness, blindness to sight. The people saw the results, but further than hearing the word or seeing the touch, the process was beyond their ken and power. Wonderful, O teacher! Those miracles were real, but you can only *read* about them. There is a miracle of today, real, right at hand: The school farm is to become a *living miracle* to the students. Here is a miracle you can see, have a part in performing—a miracle without whose daily continuance school could not keep, the war could not be won, you could not go on teaching, the work could not be finished. And God is in this miracle: "The same God who guides the planets works in the fruit orchard and in the vegetable garden." Again, wonderful! Is it so to you? Are you making use of it? What a pity if you have no farm, no garden, no flower bed—no living miracle to profit by in your teaching!

A parable of instruction, a miracle of production—why not have a living one?

## Soil Culture and Soul Culture

Mrs. E. G. White

Because difficulties arise, we are not to drop the industries that have been taken hold of as branches of education.

Look at nature. There is room within her vast boundaries for schools to be established where grounds can be cleared and land cultivated. This work is essential to the education most favorable to spiritual development.

Some do not appreciate the value of agricultural work. These should not plan for our schools; for they hold everything from advancing in right lines.

Study in agricultural lines should be the A, B, and C of the education given in our schools. This is the very first work that should be entered upon.

Our schools should not depend upon imported produce, for grain and vegetables, and the fruits so essential to health.

Different teachers should be appointed to oversee a number of students in their work, and should work with them.

Small fruits should be planted, and vegetables and flowers cultivated, and this work the lady students may be called out of doors to do.

### Words Spoken by the Heavenly Watcher

"Land about the school is to be reserved as the school farm. It is to become a living parable to the students."

"The youth who shall attend our schools need all the land near by. They are to plant it with ornamental and fruit trees, and to cultivate garden produce."

"All the land near the building is to be regarded as the school farm, where the youth can be educated under well-qualified superintendents."

"Students are not to regard the school land as a common thing, but are to look upon it as a lesson book open before them, which the Lord would have them study. Its lessons will impart knowledge in the culture of the soul."

The land will yield its treasures, bringing the joyousness of an abundant harvest; and the produce gathered through the blessing of God is to be used as nature's lesson book, from which spiritual lessons can be made plain, and applied to the necessities of the soul.

Students employed in cultivating the ground, should have time and opportunity given them to tell the practical, spiritual lessons they have learned in connection with the work.

Culture on all these points [gardening and trades] will make our youth useful in carrying the truth to foreign countries.

Daily, systematic labor should constitute a part of the education of youth even at this late period.

In following this plan the students will realize elasticity of spirit, and vigor of thought, and in a given time can accomplish more mental labor than they could by study alone.

When the students employ their time and strength in agricultural work, in heaven it is said of them, "Ye are laborers together with God."—*Selected from Volume VI.*

# EDITORIALS

## Agriculture in Missionary Training

THIS issue of the EDUCATOR gives consideration to agriculture and gardening, valuable elements of the practical education necessary for mission service. Agriculture is one of the two industrial studies which are important above all others; cooking is the other. The obtaining of the raw food material and its preparation for proper assimilation by the body are manifestly matters of prime consideration for man if he would live. They are not only of chief importance to physical existence, but they involve so many elements of science as to make their pursuit one of intellectual value and pleasure.

The great problem of giving the second advent message to the heathen world involves not only intellectual and spiritual but physical considerations as well. Generally speaking, the matters of life and health in mission lands are of utmost importance. The climate is trying, diseases are many and rife; proper foods are often very difficult to obtain, and added to all this, the constant strain of working alone for souls amid the intense darkness of heathenism, results in a physical drain that is both constant and heavy. Hence from a practical viewpoint, food and its preparation must be included in the educational preparation of the missionary.

But there are reasons other than those of personal advantage that require that the missionary be an able agriculturist. He is to be a leader of those for whom he works. Agriculture plays a much larger part, relatively, in many heathen lands than in the homelands, and while the agricultural problems will in the majority of cases be radically different from those in the homeland, yet a good knowledge of the cultivation of the soil and the growth of its products in his homeland will most naturally be of value to the missionary in his adopted land. Such

knowledge will secure the favor of those with whom he lives and labors.

A man's garden not only adds directly to his health through the exercise necessary for its care and the fresh fruit and vegetables it gives him for food, but it also gives him what is often of larger returns and no less benefit—a home feeling; and the broader his knowledge and enjoyment of soil culture and its returns, the stronger becomes this home feeling. This home feeling is of benefit, if indeed not of necessity, to the success of any man's work anywhere, but doubly so in the mission lands. The fact that Carey was a botanist must have contributed in no small measure to that contentment of mind and of heart which permitted him to remain for long years in the tropical discomforts of Calcutta and its environs, and contributed in no meager way to the great and lasting success of his work. The same may be said of many another man who has lived for years amid conditions the antipodes of his native ones.

Agriculture is fundamental in the education of the missionary. It must be emphasized in Seventh-day Adventist schools far more largely than heretofore. It must be presented and studied in that broad way which will give a love for all that the soil produces and an ability to make it abundantly produce that which is necessary to the well-being and happiness of all, but of him in particular, who forsakes his own for the land of him who knows not Christ.

Teachers, we must meet the demands of the great cause that calls our schools into being. To do this we must make a long advance not only in the teaching of agriculture and its directly allied subjects, but in all features of manumetal education. Advance is our command.

*Frederick Grigg*

### Why Not —

MOBILIZE the resources of the school farm for 25 to 50 per cent increase in production the coming season?

Set the goal of raising all the vegetables, fruits, and (as far as possible) grains needed for school consumption next year?

Mobilize teachers and students for a more active personal part in home production?

Use the school farm as a living parable of instruction and a living miracle of production?

Garnish the table with fresh, wholesome fruits and vegetables, and with beautiful, fragrant flowers, of your own planting and tilth?

Fill up the shelves of the storeroom with delicious canned and dried fruits and vegetables that you know are clean and not "doctored"?

Store the root cellar with tubers that can be kept as fresh and succulent as the day you dug them?

Improve the dairy and the henery with better sanitation and more intelligent and scrupulous care?

Enlarge the apiary, and the sorghum and the yam patch, that you may keep "dripping sweet" out of your own resources?

Keep down prices on the menu, not only by "knocking out the middleman," but also by combining producer and consumer into one?

Mobilize garden spots everywhere — back yards, side yards, vacant lots, fence corners, right-of-way along railroads, interurban lines, and country roads — any piece of unused land within reach?

Proceed at once to fertilize, pulverize, vitalize your garden spot — and minimize every difficulty that stares you in the face?

Produce as much surplus as you can to help feed the hungry and suffering multitudes in the world?

Gain, regain, and maintain physical health, elasticity of spirit, and vigor of thought by living and laboring more out of doors?

"Work the soil cheerfully, hopefully, gratefully," and "use the produce gathered through the blessing of God as nature's lesson book, from which spiritual lessons can be made plain and applied to the necessities of the soul"?

### Soldiers of the Soil

THE United States Government has organized a "National Food Garden Commission" with Charles Lathrop Pack as president. Among the members are Luther Burbank, Dr. Chas. W. Eliot, Dr. Irving Fisher, John Hays Hammond, President Hibben of Princeton, and others of similar station. Mr. Pack says that during the past year 1,150,000 acres of city and town land were under cultivation for the first time in the form of gardens, and that a national survey has located nearly 3,000,000 such gardens. About 27,000 were cultivated in Chicago alone. In this first year of effort, the nation's food supply has been increased about \$350,000,000 by the planting of urban and suburban gardens. In other words, the garden area of the country was more than trebled, resulting in an increased price of garden produce of only 22%, or less than one fifth of the increase in the price of breadstuffs.

But Mr. Pack says this is only a beginning of what ought to be done and what is expected the coming season. The government is planning for 2,300,000 men under arms, and this means that Uncle Sam's board bill for his soldiers will be at least \$1,000,000 a day, or about 40 cents per capita. This host of men are of course taken out of the producing class, and will doubtless consume more than they did in private life. The past year the home women of our country put up nearly 500,000,000 quart jars of vegetables and fruits, which is at least three times as much as in any season before.

While Uncle Sam is mobilizing a vast army of soldiers and sailors for the front, there needs to be developed an equally large army of soldiers of the soil. Every one of these who can raise enough prod-



uce for himself and his dependents, even if he has no surplus, will not only assure his own food supply, but leave an increasing amount in the general supply to provide for others. Gardening is one of the most economic ways to supply the table, and since there are so many other advantages to gardening, let every possible man, woman, and child enlist as a soldier of the soil.

### The Sign of the Hoe

THE exigencies of war are pressing into service many primitive means and modes of doing things. For lack of men and vehicles, old-time sleds, sleighs, and carts are being used to draw coal and groceries, with their owners as drivers to deliver their own purchases. To get coal the other day the managing editor was glad to load a little old-fashioned wagon belonging to the dealer, drive it home, put the coal in the bin, return to the yard and reload it for a widow in distress. A bill is before Congress to take over the old Chesapeake and Ohio Canal, build 500 new canal boats, and mobilize enough "Virginny" mules to draw them full of coal from the Cumberland region to Washington. At the national capital women and girls may be seen knitting, knitting, knitting everywhere — from the street car to the church on Sunday and in the galleries of Congress — and in Billy Sunday's tabernacle.

But the most impressive and significant return to primitive practices is the man with the hoe, especially the man who has not touched a hoe handle for years. He may be seen in his back yard, front yard, vacant lot, and fence corner. One we saw had actually planted potatoes between his geranium plants beside his front steps. The sign of the hoe is auspicious. It looks not ill but good — good for the health, good for the larder, good for its influence on the rising generation. The plow and the hoe are bread-winners, war-winners, health-winners, and may become soul-winners. Out at old Fort Hays, Kansas, they have even attained the cultural dignity of diploma-winners.

Down at our own Oakwood, Madisou, and at "E. M. C.," they have demonstrated their usefulness at school, and they are fast winning their way at Ooltewah, Lacombe, Mt. Ellis (with its "diner" potatoes), College Place, "P. U. C.," Lodi, and other places we cannot stop to mention.

Tilling of the soil is the most fundamental and rational of pursuits. It was Adam's first and it will be the saints' ultimate occupation. An old German law gave the farmer everything he turned up with his plow, and reserved for the emperor everything below the plow's depth, thus encouraging the farmer to plow deep. But the wise man says, more democratically: "The profit of the earth is for all: the king himself is served by the field." Thomas Jefferson said: "The chosen people of God are the people who till the soil — and do their work well." What some *schools* that profess to belong to the chosen people of God, have done so well, as told on other pages of this issue, they can do still better, and other schools can do equally well — if they *will*. Who will pin the sign of the plow and the hoe on his lapel, so to speak, and join the Ancient Order of Soil Tillers?

### Get at the Real Facts on the School Farm

Do not guess. Do some figuring. Make a farm budget. Make a clean job of farm accounting. Dollar figures are important, but according to G. F. Warren, the farm management-man, of New York, "dollar figures are the least valuable of all." By dollar figures he means cash accounts and the like. "It is the figures that deal with pounds and bushels that count," says J. Clyde Marquis, in the *Country Gentleman* of Dec. 22, 1917, and then proceeds with considerable detail to outline a reliable method of getting at the real facts in conducting a farm. Let every reader who is interested read the entire article, "Farming Without Guesswork," especially the summary of twenty-two specific ways and means of getting at the real facts.

## Farming Their Way Through College

It is no new idea that ambitious boys and girls may earn their way through school as they go. Thousands have done it in the past, and more than one hundred fifty thousand are doing it today in the schools of the United States. First-rate colleges and universities, like Yale, for instance, place considerable premium upon the student quality of young men and women who make their own expenses while completing a college course. They say that such students know what they are in school for, apply themselves earnestly to their work, and develop much better initiative, self-reliance, and moral fiber, than those who depend upon their "dad" to carry them through.

Nor is it an entirely new idea that a school farm is one effective means of providing a way by which determined boys and girls may help themselves while going to school. It is an idea, however, that needs emphasizing. One of the very best ways for Seventh-day Adventist young men and women to earn their school expenses is by canvassing during the summer, for it serves the double purpose of earning a year's money in a short time and of placing gospel literature among the people. Not all succeed in this work, however, and it is incumbent upon the school management, like Paul, to be all things to all students, and make every possible source available to them for helping themselves through school.

Farming is one of the very best things to include among the all, for it serves the quadruple purpose of helping students on their expenses, supplying the school with the best quality of table produce, bringing a very practical element into education, and affording a most excellent means of keeping up the health and maintaining good discipline during the school year, as well as in the summer recess.

More than this, farming their way through college is a feasible thing for students, as is well told in the *Country Gentleman* of Dec. 22, 1917, under the same title as our own. Out in western Kansas in the "short grass" region

formerly known as the Great American Desert, where Colonel Cody won the sobriquet "Buffalo Bill," and where Sheridan and Custer made their headquarters while quelling the last savage uprisings on the plains, there is an institution called the Fort Hays Normal School, located not more than sixty miles from our own little academy at Downs. According to the writer of the article, P. Caspar Harvey, the boy or girl who can reach this school can stay there solely by work on the campus farm.

The activities of this school are four-fold: Students can go to school, farm, use their own produce, and conserve food. "For the fiscal year just ended, these productions represented a total of \$50,227.41, of which \$16,975.05 was the net labor income to the 165 individuals from the student body who participated. While some still depend on 'dad' and others make only part of their way, many students make their entire way. However, there is no limit to the number of students who can come and earn their expenses, because the campus of the school contains 4,300 acres." To each boy and girl of western Kansas, Prof. E. B. Matthew, the director of the project work, says: "Have enough money to get on the campus. If you will farm, garden, milk cows, churn butter, raise chickens, slop pigs, peel potatoes, wash dishes, or keep bees, you can get your college education."

The project system in this school, according to Mr. Harvey, is simply this: "A boy or girl enrolls in a class and is assigned in the gardening project, for instance, a certain plot of ground; he studies in class what to do with the plot; he plants, cultivates, and markets under the direction of Professor Matthew and his assistants; the returns keep him or her in school. There are nine of these projects. Each is maintained independently, but run along the same lines as far as the school work is concerned. The other traditional college subjects are taken in class attendance along with the project work;

there is no interference. The projects are: Gardening, field crops, dairy, pigs, poultry, creamery, greenhouse gardening, bees, and students' dining-hall project."

It must not be thought that with this strong industrial element in the school there is no interest in cultural subjects; for, says Mr. Harvey, "the departments of music and literature are the most patronized ones in the school. Culture is not for its own sake, but for the sake of life. It is not a period of isolation, but a period of living by actually doing. Music and literature take root in that kind of soil."

The most popular of the nine projects in the Fort Hays school is gardening.

The gross production of the 8 producing projects amounted during the year to \$24,626.75, produced by 124 students, making an average gross income of

\$198.60 for each student. Board at the dining-hall is \$3.50 a week. The 124 students thus produced \$4,648.68 worth of food above their own consumption.

Are there any failures?—Of course there are. "The romance attached to 'working my way through college' is not failure-proof," according to Professor Matthew. Several instances are related where students lost heart in their enterprise and turned it over to other students or to the school. These failures are taken up by more energetic and persevering students and turned into successes to add to their own enterprise. The whole enterprise does afford an excellent opportunity for every young man and woman to show the stuff he is made of, and to gain, if he will, a growth in initiative, independence, and ability to carry through what he sets out to do.

## The School Farm as a Health and Economical Asset

It is proposed under this heading to consider the possibilities of the school farm from the viewpoints of health and economy. We have believed in the potentialities of soil culture from the day that the study of agriculture was clothed with the dignity of being "the A, B, and C of the education" to be given in our schools, and pointed out as "the very first work that should be entered upon." We believed in the value of farming before that, but we should not have dared to express our belief in such bold and meaningful language till a better authority than we are worded it for us.

And now come science and scholarship to support this courageous view. We were much exhilarated recently by the reading of an article entitled "The College Farm," in the *American Schoolmaster*. It is written by Wallace N. Stearns, professor of History and Biblical Literature in Fargo College, N. Dak. That the writer is a man proficient enough in history and Bible to stand at the head of a college department, makes his article all the more interesting; for it is evident that he is well informed on

the practical side of farming and commissary work, and he represents a blend of interests that we wish could be found in the head of every literary and scientific department of our own schools. He sets the problem before us in this way:

"One of the vexed questions of administration in many colleges is table board. Boys and girls leaving home where good, wholesome diet is a matter of fact, too often accumulate a heritage of dyspepsia, thereafter to become a fixed factor in the family blood. The weekend at home so ardently looked forward to, the gibe so often passed, the sorry memory brought out by the old graduate as a skeleton from the closet, and the fact that certain otherwise reputable dishes recall harrowing recollections—one and all suggest that college board has not yet been made perfect.

"An army moves on its belly, but *the fact that a student's success largely depends on his diet has not been fully recognized* [italics ours]. A monotonous menu taken on the hop, skip, and jump, in a dingy, uninteresting dining-room,—probably a moldy basement,—from

dishes whose sole recommendation is their indestructibility, is not a means of health, wisdom, or grace."

After discoursing on how the dining environment should be put on a high plane of cheeriness, sanitation, and esthetics, he plunges into the economic side of the question. The general proposition is stated thus:

1. "Every college has, or should have, a department of practical elementary agriculture.

2. "It is possible for a college to own or at least lease the necessary ground space.

3. "The enterprise then should aim at *instruction* and the *production* of staple vegetables and fruits (fresh, dried, or canned), with eggs, milk, and butter for the college table [*italics ours*]. This would result in a diet sound, fresh, and free from all taint."

The writer then gives several sets of scientifically estimated facts and figures on supplying the school commissary from the farm, from which we draw freely with some adaptations.

**Estimate for School Year of 36 Weeks**

	Per capita	100 students
Potatoes	2 bu.	200 bu.
Beans		
(twice a week; 1 bu. = 400 rations)	6 qts.	18 bu.
Fruits	1½ bu.	125 bu.
a. Fresh (18 weeks)	20 qts.	
b. Canned and dried (18 weeks)	20 qts.*	
(Once a day; 1 qt. = 10 rations)		
Vegetables	1½ bu.	125 bu.
a. Fresh (18 weeks)	20 qts.	
b. Stored (18 weeks)	20 qts.†	
Eggs	8 doz.	800 doz.
a. Served twice a week, 6 doz.		
b. Used for cooking, 2 doz.		

\* This amount allows for one third shrinkage from the bulk of fresh fruit required to produce it. The total of 125 bushels is on the fresh-fruit basis.

† Fresh and stored fruits and vegetables are estimated at 18 weeks each on the basis that the school year would divide about evenly between the two, not in succession, but as a whole.

	Per capita	100 students
Milk (1 qt. a day for both drinking and cooking)	63 gal.	6,300 gal.
Butter (Served 3 times a day; 1 lb.= 48 portions)	18 lbs.	1,800 lbs.
Honey (Served once in 2 weeks; 1 lb.= 8 portions)	2½ lbs.	225 lbs.
Breadstuffs (Estimated average, ½ lb. a day)	126 lbs.	12,600 lbs.

Reversing the problem, how much land would be required to produce these table supplies? The following will serve as a rough estimate:

200 Bu. potatoes at 80 bu. per A.....	2½ A.
18 Bu. beans at 12 bu. per A.....	1½ A.
125 Bu. fruit at av. of 100 bu. per A.	1¼ A.
125 Bu. vegetables at av. of 45 bu. per A. ....	3 A.
800 Doz. eggs at 12 doz. av. per hen, 70 hens .....	2 A.
225 Lbs. honey at 25 lbs. per swarm. ....	9 swarms
6,300 Gal. milk and 1,800 lbs. of butter (12 cows at 2½ A. a cow for pasture and feed*) .....	30 A.
Total .....	40½ A.

What would be the cost of land and outfitting such a school farm enterprise? Following are the estimated values:

40 A. land at \$150.....	\$6,000
12 Cows at \$100.....	1,200
70 Hens at \$1.....	70
9 Swarms of bees at \$10.....	90
200 Doz. cans at \$1.50.....	300
Buildings, if new.....	1,000
Equipment, tools, etc.....	500
Value of investment.....	\$9,160

For the conduct of the farm, the accounts credit and debit may be reckoned thus, with the prices at normal times:

**Account Credit**

Interest on investment at 5 per cent.....	\$458
Salary man at \$75 for 12 mos.....	900
Extra help at \$25 for 12 mos.....	300
Taxes and insurance.....	120
	<u>\$1,778</u>

\* This estimate is for the Jersey and Guernsey strains, yielding 3,000 gal. and 200 lbs. respectively. Those having Holstein cows can reckon accordingly.

## Account Debtor

Value of produce raised:	
200 Bu. potatoes at \$1.....	\$ 200
18 Bu. beans at \$7.....	126
125 Bu. vegetables at \$1.....	125
125 Bu. fruit at \$2.....	250
500 Doz. eggs at 30c.....	150
225 Lbs. honey at 25c.....	56
6,300 Gal. milk at 30c.....	1,890
1,800 Lbs. butter at 30c.....	540
	<hr/>
	\$3.337

From these tables, Professor Stearns draws the conclusion that the advantages

of operating the school farm are nearly in their ratio of 2 to 1, as shown by a comparison of the two latter totals.

So much from the economic and health viewpoint—the latter on the basis of *dietary* value only. Add to this the participation by students in the production of the crops, and the health value of the school farm is at least doubled.

**MORAL:** Raise your own produce. Do it with student labor. Realize health and economy. Live off the best of the land.

## How Madison Keeps Down the Prices

BY E. A. SUTHERLAND

IN these days of high prices, men are coming to realize that he who owns a few acres and is able to raise the food for his own table is a king. As David Grayson says, "We [farmers] dig and plant and produce, and having eaten at the first table ourselves, we pass what is left to the bankers and the millionaires." In such times as these the school that can furnish its tables from the products of its own land and by the labor of the school family is solving a problem that makes the world take notice.

According to the Madison system of living, the entire school family eat at a common table where the food is served on the cafeteria plan, each one paying for the food he eats. The cooking is done by young women working under the supervision of a member of the faculty. It is in this way that the art of cooking is taught in this institution.

In the school gardens is raised *practically all the food required by both the student and the sanitarium family*. By careful planning, greens of various sorts are grown nearly the year round. Corn, beans, okra, tomatoes, sweet potatoes, greens, and other vegetables are canned or dried. This past season greater attention than ever before was given to drying both fruits and vegetables. A homemade dry-house was constructed, and the surplus of nearly every crop was dried. Drying foods has fallen largely into dis-

use, but war conditions are compelling people to return to this simple and economical method. It is a process adaptable to all homes.

The school early signified to Mr. Hoover its determination to co-operate in the matter of a wheatless meal each day; it never uses meat in any form; it has limited the amount of sugar consumed in harmony with the Government's request; and the subject of butter substitutes is being solved by the manufacture of a koko-margarine.

The wheatless meal is an interesting problem here. The school raises its own grains,—wheat, rye, corn,—and its own mill grinds the flours. For one month breakfast is the wheatless meal; the next month it is dinner. As a wheatless breakfast, for instance, there is served corn or rye in some form as a cereal, rye and corn mixed for a pone, sweet potatoes or Irish potatoes, tomatoes, some dish rich in protein made from soy beans or from some other one of the legumes and nuts, sorghum or honey, and some sauce, all home-grown foods.

For some time the school has been working away from dairy products, which in the early days of the work were the main source of income. The expense of raising feed to be converted into dairy products is too great to be styled an economy. It is estimated that it requires about ten pounds of grain to make one

pound of butter. Better use the grain direct for human food, and substitute vegetable oils for dairy butter. On an acre of ground that produces \$30 worth of feed for the cattle, one can raise garden vegetables, etc., for the human family worth approximately \$150 if taken direct from garden to the table. So the Madison school is adopting the latter method.

The study of foods and food values is a live one. Neither the matter of menus nor of the varieties of garden seeds to be planted is left to one individual. There is a large committee, known as the Food and Garden Committee, which holds a weekly meeting for the study of the whole problem of producing and preparing food for the family. Each year by the first of December this committee has submitted to the executive board a list of the seeds needed for next spring's planting. Every member of the family has had a chance to study this question and to express an opinion. The food question is an open one, and the committee is alive to suggestions from all sources.

The work of the institution is done by the students and the faculty. No wage increase has been necessary, because there has been no increase in the price of board or living expenses on the place since the school was established **thirteen years ago**. When wheat is selling for \$2.80 a bushel in the city, bread costs the same on the Madison school tables as when wheat sold for ninety cents. Why? — Because *the wheat has been raised by the family, ground by the family, baked and served by the family*, and even the seed, as fine as any in the State, has been laid aside for the following season's planting. This same policy is pursued with other foods. [All italics ours.]

Several things enter into the success of this plan. The school eliminates, to a large extent, pastry and rich desserts, serving fresh or cooked fruit instead. It serves plain, wholesome food, and endeavors to put a balanced ration within the reach of the family. Health keeping as well as health restoring is a part of the program. "We are to learn to be *content with simple food and clothing*." We are

learning this, and in the process of learning we are finding that many others are looking to us to show them how to do the same.

While helping Uncle Sam in his need, we have also the satisfaction of knowing that Madison is putting this training within the reach of about a hundred students annually, and is sending a corps of workers into the field as self-supporting missionaries.

### College Dairies

THE dairy is coming to be one of the most important factors in the economic life of our colleges and other boarding schools. The three best-developed dairies we know of among our schools are at Union College, Walla Walla College, and



UNION COLLEGE BARN

Stanchions for 34 cows, 3 box stalls, rat-proof, 2 silos, electric-lighted, perfect ventilation, fully equipped milk house. Cost \$6,200. Best barn in Nebraska.

Emmanuel Missionary College. All three of these schools have recently built fine new sanitary barns for their herds. A picture of the Union College dairy barn is given herewith together with facts of information about it. The Walla Walla College dairy barn was built about a year ago, chiefly of redwood lumber, at a cost of about \$1,800. In style these are both typical dairy barns. The Emmanuel Missionary College barn is a combination feed and dairy barn, somewhat on the old style of architecture, but thoroughly roomy, convenient, and sanitary.

After various experiments, these three colleges have settled on the Holstein breed of cows as the most satisfactory, everything taken into consideration. The Union College herd now contains some thirty-odd cows, practically all registered stock. The new sire has a pedigree three

inches long on a typewritten page written solid, being son of a sire valued at \$50,000. His name is College King Segis Alcartra. The Union herd of cows carried away sixteen ribbons at the Nebraska State Fair. Three of these prize winners are shown in the frontispiece.

We have not the latest figures on the Walla Walla College herd, but the last we have shows thirty in the herd. In the monthly tests by the Walla Walla Valley Cow Testing Association, the college cows have stood first by a large margin in every instance but one in production of butter and milk. Their best cow produced during one month 2,392.5 pounds of milk, and 109.75 pounds of butter, some days during this month giving as high as 93.1 pounds of milk, or about eleven gallons.

At Emmanuel Missionary College the herd of twenty-six cows is producing



EMMANUEL MISSIONARY COLLEGE BARN

Thoroughly sanitary, with stanchions, box stalls, electric lights, two silos, fully equipped milk house.

enough milk and cream, and nearly enough butter, to supply the dining-room, with frequently a surplus to sell to neighbors. The same young man—from a successful Michigan farm—has had charge of the herd for three years, using this means to help himself through college. He takes much pride in making his work first-class in every way, and any visitor who observes his well-kept barn and samples the milk will congratulate him on his success.

Our school at Madison, Tenn., has also made much of its dairy for a number of years, but has recently been working away from dairy products somewhat, because of the expense of raising feed to

supply the herd. They reckon that on ground that produces \$30 worth of feed, they can raise products for direct consumption worth about \$150, though of course it should be remembered that this is not the only factor of importance entering into the proposition.

Quite a number of our academies are doing well in the development of their dairy herds. Some have Jersey and Guernsey breeds, on the ground that they are easier to feed and the milk is richer in quality. We saw a recent scientific statement to this effect: "The Jersey, excellent for cream and butter production, and the Holstein for milk. The best general-purpose cow—for meat, milk, and butter—is the Guernsey."

As we are treating the general subject of the college farm in another article, we close this one by saying that we appreciate the wide-awake and thorough-going way in which the management of our schools is giving attention to their dairy herds from the standpoint of both sanitation and the quality of the products.

### Farming at Oakwood in 1917

"CROPS were never better in the history of Oakwood," writes Prof. J. I. Beardsley, President of Oakwood Junior College, and then gives the following interesting facts to substantiate this assertion:

"Our 40 acres of cotton is as good as any in the vicinity," he says, and if the crop is relatively as good as last year, he could say that it was considerably above the average. Cotton is selling at the handsome price of 30 cents a pound, or \$150 a bale, and Oakwood expects about 30 bales this year. Other crops are:

Corn, 120 acres, with a yield of nearly 3,000 bushels, besides twice as much shredded fodder as will be needed for 40 head of stock, and the yield from five acres put into the silo.

Sweet potatoes, 3½ acres, yielding 800 bushels, now in the cellar for winter consumption; "and they are fine, both in size and in quality," says the president.

"In the same house is stored the 1,447

gallons of sorghum made from our little four-acre patch. School was dismissed one day, and more than 50 students, led by Brethren Bird, Jeys, and Swofford, heads of our Bible, English, and Farm departments respectively, spent most of the day stripping the cane, which was from 10 to 14 feet in height. For the next two weeks each morning as the sun peeped over the long, level back of Monte Sano, it found Brother Swofford and his boys grinding sorghum with a team of mules, and boiling it down in our evaporator at a rate of over 100 gallons a day. Those who have tasted it say sorghum quality never was better. Besides this, we made 900 gallons for neighbors, receiving one third for making.

"In the cellars are 11,000 quarts of fruits and vegetables canned for winter use. Our patch of peas produced 150 bushels on ten acres of our poorest land.

"Large patches are still yielding supplies of turnips and collards. About 4,000 cabbage plants were set out and did well. From our two-acre watermelon patch we had an abundant yield. Often a wagonload would be brought onto the campus and distributed to the workers.

"The needs of our land were seriously studied, and the soil was given good attention, both before and after planting, thus giving the students practical training. Late and early frosts cut the crops short in this vicinity, some of our neighbors claiming but half a crop, but in the midst of this the Lord blessed our hard work and planning. All of this is accomplished on land that has been farmed for nearly if not quite a century, and but a few years ago was supposed to be worthless. This year our supply is *not only abundant, but of excellent quality*. Our corn is good; our sorghum took a ribbon at our county fair; and four of the sweet potatoes make two meals for a family of six hearty eaters, and said potatoes are so sweet that the sweetness actually drips from them when they are served.

"God has been good to us, and kept his promise to bless faithful efforts put forth to till the land on this farm."

## E. M. College Farm

BY FRED GREEN

As the years pass by it becomes more and more apparent that our farm of 264 acres is a real asset to the school. In these days of high prices and congested and delayed transportation we see more clearly the truthfulness of the wise man's statement, "The king himself is served by the field."

Not only is the college farm a distributor of superfluous energy and nerve force, serving as a valuable aid to good discipline, but through constant improvement of the land by adding from four to five hundred loads of barn-yard manure each year, and with better attention to the methods of production, the land is becoming better, and more crops are raised from year to year.

The year 1917 was a very trying one to the farmers of this section of the country. A late, cold spring and exceptionally early frosts in the fall made the season very short, yet we are thankful indeed for the year's produce.

We are endeavoring to raise just as many supplies for the dining-room as we can. Home market is the best. In years past we raised fruit for the market. Sometimes we had a handsome profit—most of the time we did not. The farm is now devoted to the support of the dairy, which is perhaps the most profitable division of agriculture, and to the producing of as many fruits, grains, and vegetables as are needed for the college table. Products from the dairy are always staple. When we have a surplus, it is easily disposed of. Enough milk and cream and nearly enough butter are now produced from twenty-six cows to supply the school commissary.

The 25 acres of corn was overtaken by an early frost and would have been practically worthless had it not been hurried to the silos. This year 690 bushels of potatoes were grown on 6 acres; 212 bushels of wheat on 12 acres; 828 bushels of oats on 25 acres; 384 bushels of rye on 15 acres.



The garden was very successful, yielding an abundance of green vegetables during the summer, and enough tomatoes, spinach, green beans, and other articles for canning, and plenty of coarse vegetables such as parsnips, carrots, turnips, beets, salsify, etc., for winter. From 4 acres of beans several varieties have been gathered.

Teachers and students alike took an active and willing part in harvesting the crops. For example: To a call for volunteers on November 4 to dig our potatoes, a generous response was made by students and teachers, including the president; as a result, the entire crop of 322 bushels was harvested in one day.

The total receipts from the farm, including the garden and the dairy, are about \$4,500.

### School Bill of Fare

THE following list of foods and prices was taken recently from the blackboard bulletin in the serving-room of one of our colleges. Compare these "war prices" with those found in the cafés and restaurants of our cities.

	CENTS
Cream pea soup .....	3
Pea and nut salad .....	4
Mashed potatoes .....	3
Gravy .....	2
Roast .....	3
Sliced tomatoes .....	3
Cabbage .....	3
Beans .....	3
Scalloped corn .....	3
Banana-tapioca pudding .....	4
Bread (12 slices to a one-pound loaf)	
by the slice .....	1
Butter (32 pieces to a pound) by the	
piece .....	2
Milk, by the glass .....	3
Cream .....	3
Cereals (hot) .....	4
Fruit sauce .....	4
Bananas .....	2 and 3
Oranges .....	3 and 4

Such prices are owing largely to the advantages this college has in cultivating a good farm on the basis of making its products go the farthest possible in supplying the kitchen. For the same reason

another of our schools has not changed the prices of foods since the war began, nor for several years before.

### Farming at Ooltewah

DURING the farming season of 1917, the students and teachers of Southern Junior College raised the following produce:

- 1,200 Bushels corn
- 30 Bushels soy beans
- 18 Tons hay
- 2 Tons oats for fodder
- 20 Bushels black-eyed peas
- 100 Bushels sweet potatoes
- 20 Bushels turnips
- 50 Acres fodder for shredding
- 115 Gallons sorghum
- 8,000 Quarts canned goods

"It is interesting to note," says a report from there, "that thus far this year it has not been necessary for a single canned article to be bought for the school." For the year 1918 larger plans are being laid. Besides providing for a twenty-acre garden, the following bill of goods was recently bought for the vineyard and the orchard:

- 150 Concord grape vines.
- 50 Lurie grape vines
- 50 Brighton grape vines
- 50 Norton Virginia grape vines
- 50 Perkins grape vines
- 2,000 Asparagus plants
- 10 Black walnut trees
- 10 Butternut trees
- 10 Wildgoose plum trees
- 30 Early Harvest apple trees
- 20 Kinnard Choice apple trees
- 10 Winesap apple trees
- 50 Early Richmond cherry trees
- 10 Black Tartarian cherry trees
- 10 Shropshire Damson plum trees
- 10 Reine Claude plum trees
- 10 Seckel pear trees
- 5 Kieffer pear trees
- 30 Mayflower peach trees
- 40 Belle of Georgia peach trees
- 20 Alexander (Redbird) peach trees
- 70 Elberta peach trees
- 10 Pecan trees

Strawberry, raspberry, blackberry, and dewberry plants also were ordered.

There are already about 100 fruit trees on the farm in bearing condition.

A fruit-ful and promising program!

### High Points in Farming

*At Oakwood.*—Three fifths of our food is raised on the farm.

The only staples we purchase are flour, sugar, and salt.

All the farm work is done by students and teachers.

Our teachers work with the students.

*At Emmanuel Missionary College.*—We produce as many fruits, grains, and vegetables as are needed for the college table.

Our dairy supplies enough milk and cream, and nearly enough butter, for our own use.

We find easy sale for our surplus milk and cream when we have it.

Flour, sugar, and salt are the main food staples we buy.

Our work is done by students under a farm superintendent.

Teachers take a willing part in crop raising.

*At Madison.*—We raise practically all the food required by both the student and sanitarium family.

We raise our own grains, and grind them into flour in our own mill.

We have a food and garden committee which meets once a week, and by the first of December has the next spring's planting all arranged for.

We have made no increase in the price of board or living expenses since the school was established, thirteen years ago.

Our work is all done by students and teachers. Every teacher carries some industrial responsibility.

*At Ooltewah.*—We have set for our goal the raising of enough farm produce to make the school entirely independent of outside markets.

We must buy some staples, like sugar and salt, but plan to buy them with the farm surplus.

So far the present year, not a single canned article has been bought.

Our work is done by the students under a farm superintendent.

Teachers share the farm work with the students.

### Gardening for Children \*

*Its Educational Value.*—"Gardening is now recognized as having much educational value. A child properly trained in gardening gains knowledge of natural forces in the most direct way. He forms habits of industry, learns patience and perseverance, learns to meet adversity, develops his reasoning powers, spends hours with useful and beautiful things, has physical exercise under ideal conditions, and at the same time is laying the foundation for delightful and wholesome recreation in later life.

"Teachers who realize the importance of school gardening can gradually make gardening a part of the school work. If there is not a large piece of ground for a school garden, a little corner can be found in which the class will be able to plant a few seeds and perhaps harvest a small crop before the close of the school year. Seeds are wonderful in themselves. The miracle of a poppy would alone be a lesson worth the while. Let the child realize the wonder of a radish plant coming from the small seed that is put into the earth. The practical side of gardening is distinctly important, and of itself would be worth while in the education of a child; but when we realize the *spiritual development* that can come through the love of growing plants, we find our responsibility in putting this development into as many lives as possible.

*Some Causes of Failure.*—"A number of persons have failed in school gardens largely because they did not give sufficient thought and preparation to the work. Some enthusiasts undertook the enterprise because it was a new feature in education, and was more or less interesting to the public. But when there was realization of the labor necessary to keep a piece of ground in cultivation, and the amount of effort needed in the beginning to keep the children interested, there was not enough enthusiasm left to investigate the cause of and overcome the difficulties.

\* These paragraphs are selected from an article on "Gardening with Children," by Alice Gertrude McCloskey, in the Cornell Rural School Leaflet for September. The last topic is given only in digest.

"Very often too much is attempted the first year. Some very attractive school-gardening work has been done on large pieces of ground with hundreds of children. The persons who have made a success of this work have had deep belief in its value, and have given much perseverance and time to developing the enterprise. Noting their success, many teachers have endeavored to do likewise. They have had the children cultivate some large piece of ground, difficult perhaps to work, and failure followed. It were far better to make very small beginnings, teaching children to cultivate a few plants well, than to have them undertake too much without knowledge or energy to complete what they have begun. Let the first efforts be very simple.

*Make a Beginning.*—"Whatever the hardships it is worth the while, if for no other reason than to give the children the resource that love of gardening brings into their lives. Do you think that gardening is a wholesome and healthful thing for little children, for their bodies and their minds? If so, give the young persons in your community, whether in the country or the city, this opportunity for development. Do not be discouraged if those who sit by the wayside question your success. Some persons will expect to see the children carrying baskets of flowers to the hospitals at the end of the first year; they will expect the garden to be a thing of beauty free from weeds. Do not be discouraged if you cannot accomplish all this. If a fair start is made in the first year, time will bring about desired results. Each year the work will grow stronger; each year the garden can be more profitably cultivated; each year the children's love of the soil and the green things growing will increase."

*Some Things to Consider.*—1. Organize well. Everything should be worked out carefully before the time of planting.

2. Start with small plats; children become discouraged if they have more to do than they can do well. A plat 8 x 10 feet is as large as the average school children of 10 or 12 will care for well at first.

3. Provide tools early. Small-sized hoes and rakes of good quality are better than large ones.

4. Test the seeds. Children should learn to test seeds that they buy.

5. Market the produce. Let each child take his produce to homes or to the market in the most attractive form. Baskets for the purpose may be made in the wintertime.

6. Cultivate moral qualities. Inquiry, accuracy, patience, perseverance, and courage in adversity may be developed in the school garden.

7. Encourage home gardens. Induce the school children to have gardens at home if possible. Visit their home plats as often as you can, to encourage the children.

8. Be sure to arrange for continued care of the gardens through the summer. If you live in the community, meet the children at the school garden once or twice a week regularly through the summer. If you do not live there, arrange for some one who does to take your place, or, if nothing better can be done, organize the pupils themselves with an older one as leader.

9. Have the children keep a careful, itemized account of their expenses and of the amount of time they put on the gardens.

10. Have every pupil write "The Story of My Garden" at the close of the school, or after the season's work is done. A sample story written by a real pupil is given on another page.

## Some Garden Rules

### Time of Sowing

THE following statement will be found helpful as a general guide for sowing seeds:

1. Flower seeds that may be sown as soon as the ground is fit to be worked in the spring: Alyssum, bachelor's-button, calliopsis, candytuft, four-o'clock, marigold, mignonette, morning-glory, nasturtium, pansy, phlox, pink, poppy, scabiosa, sweet pea, verberna, zinnia.

2. Flower seeds that should be sown after danger of frost is over. The best results are obtained if the plants are started in the house

(Concluded on page 189)

# THE MINISTRY

THE members of the Ministerial Reading Course are now reading Leonard's "A Hundred Years of Missions." It will be noticed that Leonard does not attempt to give an exhaustive study of the one-hundred-year period, but opens up the more important features which all missionary workers should know. In a subject so vast and exhaustless as missions, it is impossible for any reader to cover the whole ground, therefore we suggest that each one decide on a field which is of special interest to him and then acquaint himself with all the available literature on it. It is worth while for every minister, teacher, and missionary to inform himself thoroughly on at least one civilization besides our own.

With this in mind we have prepared the following bibliography on the fields covered to the end of February:

## General Works

1. "Early Heroes of the Mission Field," by W. P. Walsh, 249 pages. Published by Fleming H. Revell Company, Chicago.
2. "William Carey," by J. B. Myers. 160 pages. Published by S. U. Partridge Co., London.
3. "Great Missionaries of the Church," by C. C. Creegan and A. B. Goodnow. 404 pages. Published by Thomas Y. Crowell, New York.
4. "Missionary Crusaders," by Claud Field. 220 pages. Published by Fleming H. Revell Company, Chicago.
5. "Advance Guard of Missions," by Howell. 347 pages. Published by the Pacific Press Publishing Assn.
6. "Modern Mission Century," by Arthur T. Pierson. 517 pages. Published by the Baker & Taylor Co., New York.

## Africa

1. "Thinking Black," by D. Crawford. 484 pages. Published by George H. Doran Company, New York.
2. "The Zulu Yesterday and Today," Gertrude Hance. 274 pages. Published

by Fleming H. Revell Company, Chicago.

3. "Daybreak in the Dark Continent," Wilson S. Naylor. 315 pages. Published by Review and Herald Publishing Assn.

4. "Pioneering in the Kongo," by John M. Springer. 312 pages. Methodist Book Concern, New York.

5. "Personal Life of David Livingstone," Blackie. 508 pages. Published by Fleming H. Revell Company, Chicago.

6. "Uganda's White Man of Work," by Fahs. 289 pages. Published by the Young People's Missionary Society, New York.

7. "The Price of Africa," by S. Earl Taylor, 225 pages. Published by Jennings and Graham, Cincinnati; Eaton & Mains, New York.

8. "An Artisan Missionary on the Zambesi," by Mae Connachie. 156 pages. Published by the American Tract Society, New York.

## India

1. "The Egyptian Sudan," by J. K. Giffin. 252 pages. Published by Fleming H. Revell Company, Chicago.

2. "Things as They Are," Mission Work in Southern India, by Amy Wilson-Carmichael. 304 pages. Published by Morgan & Scott, London.

3. "Overweights of Joy," by Amy Wilson-Carmichael, a sequel to "Things as They Are." 300 pages. Published by Fleming H. Revell Company, Chicago.

4. "The Kingdom in India," by Jacob Chamberlain. 301 pages. Published by Fleming H. Revell Company, Chicago.

5. "In and Out of the Homes of India," by Ada Lee. 107 pages. Methodist Press Calcutta, and Mrs. Fanny L. Sperry, Mountain Lake Park, Md.

6. "Native Life in India," by Rice. 160 pages. Published by the Pacific Press Publishing Assn.

7. "Pandita Ramabai," by Dyer. 197 pages. Published by Fleming H. Revell Company, Chicago.

# THE NORMAL

## JESUS AS A TEACHER

"What he taught, he lived. 'I have given you an example,' he said to his disciples, 'that ye should do as I have done.' Thus in his life Christ's words had perfect illustration and support. And more than this: what he taught, he was. His words were the expression, not only of his own life experience, but of his own character. Not only did he teach the truth, but he was the truth. It was this that gave his teaching power."—*Education*.

## The Story of My Garden \*

ISIDORE E. KATZ, AGED 14

We started digging our garden about April 10, 1916. The digging took till May 1, 1916. When it was evened we divided it into two parts by putting a path in the middle.

On May 1 we started planting our seeds. The first thing we planted was radishes. We planted four rows of red globe, two rows of long, and one of lady finger radishes.

The next three rows were carrots. They came up in a week. At first they looked like blades of grass, but later they got their second leaves and looked like something.

After the carrots we left a space for the on-coming lettuce. When the latter was large enough to transplant we made holes about a foot apart and then put the plants in. The lettuce was very good and we made a good profit on it.

Below the lettuce we planted cabbage. After the cabbage was corn. We planted Golden Bantam, but being so near the fence we had dwarf Golden Bantam, because the hedge took all the food that was supposed to be for the corn. This is only one half of the garden; now I will tell you about the other half.

At the top we planted five rows of beets, which came up very well. Below we planted Lima beans. Below these we

had eighteen tomato plants, which bore a crop of two bushels of tomatoes.

Alongside the fence we planted more corn. Between the corn and beets were cucumbers, which died when the first frost came. Below these we planted string beans.

We tried intercropping. We planted lettuce between tomatoes, beets, radishes, and carrots. We planted cabbage between the tomatoes. After the globe radishes were gone we planted black radishes. These did not come up very well so we took them out and planted spinach.

In place of the lady finger and French radishes we planted peas, which came up very well but did not give a large crop. In place of the lettuce we planted radishes and beets. We had three rows of each.

The radishes were soon gone, but the beets remained. After the beets we planted string beans, which came up in three days. We had about 6 rows and got twelve quarts of good-sized beans.

Below the beans we planted one row of parsley. The parsley was good and grew fast, but we could not sell it. After the parsley was planted the beets began to go.

When the frost came in October the stuff began to freeze and just the hardy things remained. Where we had the spinach we made a hotbed. We enjoyed gardening very much, and intend to have a larger garden next year.

\* This story is reproduced from Bulletin, 1917, No. 26 of the U. S. Bureau of Education. Master Katz lives in Englewood, N. J., grew his garden on a plot 18 x 22 ft., kept an itemized account of expenses showing a profit of \$8.94, was visited once a month by a supervisor, and obtained a final grade of 95%.

# TEACHING NOTES—GRADE BY GRADE

## FIRST GRADE—Anna A. Pierce

**Paper Cutting and Folding.**—To cut and fold a six-pointed star and snowflakes:

Take a four-inch square of paper (white tissue paper is best for the snowflakes). Crease as in Fig. 1.

Make creases at a, b, and c as in Fig. 2.

Fold lower left-hand corner (c) to crease (c).

In Fig. 3 fold on the line c—d, folding (b) back upon (a).

In Fig. 4 fold line (a) over to (b).

Turn over and you will have Fig. 5.

Cut on dotted line in Fig. 6 and you have the star.

The design in Fig. 7 forms the snowflake.

Many-shaped snowflakes mounted on dark paper make pretty decoration for a school-room.

## SECOND GRADE—Mabel A. Swanson

**Bible.**—If ever the teacher should be full of her subject it is when she attempts to teach the story of Jesus. Let careful prayer, study, and contemplation of his life be your daily preparation. Make him real to the children, and teach them to know the power in the name of Jesus to save from sin.

For material helps, draw freely from "The Desire of Ages," "Easy Steps in the Bible Story," etc. Another good book is "Bible Lessons for Little Beginners," Part Two, by Mrs. Margaret J. Cushman Haven, published by Fleming H. Revell Company, New York. Add interest by the use of appropriate pictures, songs, and poems.

**Reading.**—Several of the stories this month are excellent for developing good expression by conversational means; for example, "Be Thankful," page 128, and "The May Queen," page 137. After reading the story as a whole, let pupils represent the different characters, and read only the spoken words. This quickens the imagination and apt expression is almost sure to follow.

"The Adversary," page 145, may present difficulties. Prepare for this lesson by reviewing with the class the fall of Satan, using the vocabulary of the lesson, to acquaint the children with any unfamiliar words.

The supplementary work may bear on Lincoln, Washington, and Longfellow, the latter's birthday being February 27. It is none too early in the second grade to begin to instil in the hearts of the pupils, the love for the beautiful in poetry. Introduce them to many of Longfellow's simpler poems dealing with child life.

**Numbers.**—To apply what has been learned about the inch and half-inch, direct the children in making designs, involving these measurements, to be colored with crayola. Begin in the plain checkerboard patterns and pass to those that are more complicated.

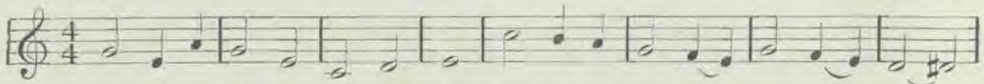
## THIRD GRADE—Edith Cummings

**Language.**—In this grade language study includes reading, writing, and spelling as well as grammar. In making an assignment be sure the pupil can read what he is to do, if the language is from the reader, and see that he understands how to do it.

## THE CLOUDS I LOVE

A. A. P.

ANNA A. PIERCE



1. I love the ti - ny cloud-lets white, That sail a - bout so soft and light,
2. I love the banks of clouds piled there, Like wool - ly sheep up in the air,
3. I love the heav - y clouds so high, That roll and tum - ble in the sky;
4. I love the gold - en sun - set clouds, That have been kissed by crowds and crowds



Like lit - tle ships a - cross a sea, Float - ing by so dream - i - ly.  
I'd like to rest my lit - tle head On such a soft and down - y bed.  
They're filled with soft and pleas - ant show'rs, To wa - ter all the thirst - y flow'rs.  
Of lit - tle sun - rays in the West, While sink - ing on their way to rest.

All written work should be done neatly, each page having the proper margins at top and right and left of page. Too much work encourages haste and slackness; better have a little done well than so much poor work.

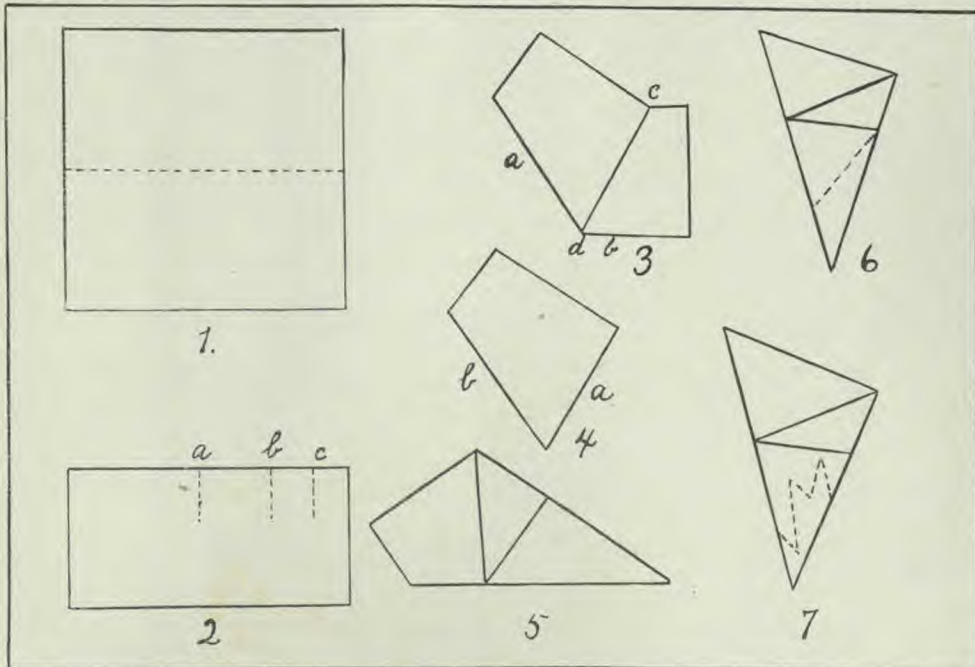
Misspelled words should be noted when correcting the work. Either write the word correctly in the margin or have the children look it up and make a note of it. If work is done in pencil, the word may be erased and re-written.

To encourage the correct use of English in speaking, let pupils make a little notebook with the words "Wrongs Made Right" on the cover, and in the book record correctly each

Lincoln abolished slavery and so on, giving a brief review in a simple way of the previous wars of the United States. If possible relate some instances where children had a part in relieving suffering and helping in any way, and suggest ways and means for children to help in the present war — by not being wasteful of paper, pencils, etc., as prices are high. Mention food conservation, sending papers to soldiers, etc., and last but not least, impress their minds with the seriousness of conditions and the soon coming of the Saviour.

These thoughts may occupy the opening exercise period for a week or more.

**Spelling Device.**—A pretty booklet may be



wrong expression they hear; such as, "Can I sharpen my pencil," "I got a new dress," "I seen a bluebird."

Did you ever play "Telling the News"? Little children always have so many things to tell the teacher. Once in a while use these items in the oral language lesson. Several grades may do it together, and let the listeners correct grammatical errors, always in a nice way making apology. Suppose Mary says, "Mr. Brown come home this morning." John raises his hand and when Mary calls on him, he says, "Mary, would it not be better to say, Mr. Brown *came* home?" or "Excuse me, Mary, but you should say, Mr. Brown *came* home."

February brings the birthdays of two noted men, Lincoln and Washington, and as these men lived during time of war, and at present we are all interested in war, spend a little time in telling of their work and influence; how

made in the shape of a house. For every perfect lesson the teacher makes a log on the house with brown crayola. When the month is finished, the house is a picture of Abraham Lincoln's log house.

The flag may be made in the same way by omitting as many stars as you have spelling lessons, and for each perfect lesson the teacher adds a star.

**Bible.**—Let us not forget the memory verses given. Review them often. Suppose the children repeat verses instead of having the Scripture reading two mornings a week. Always give reference with the verse.

#### FOURTH GRADE — Mrs. Irene Ayars

**Arithmetic.**—For the month of February cover pages 216-227. Nearly all this month is spent studying division. The explanations on

pages 216, 217, are very good and can be made quite plain to the children. Spend a lot of time on the drills on pages 218-221, because these will be a great help to the class in mastering long division. Many children have trouble in understanding this part of arithmetic, but if you go slowly at first and give many drills, the children will get along all right. Do not give long assignments.

**Bible.**—Lessons 71-88. Draw maps of Egypt, Arabia, and Canaan, and as the class proceeds with the lessons on the exodus of the Israelites, have the maps filled in.

A good drill for the class is to have an outline map of these places on the blackboard, and as the children tell the stories in class have some one put on the map from memory the places mentioned.

Lesson 87 gives the ten commandments for a memory drill. If the children have never learned these before, more than one day should be given for it.

**Bible Nature.**—Finish Chapter X and take Chapter XI to page 124 for this month.

While studying about the plants make the lessons just as interesting and instructive as possible by having the plants in the schoolroom; or if you are in a climate where plants are growing in the woods in February, take the children out into the woods to study the plants.

Plant seeds in boxes in the schoolroom and watch developments. When studying the bean, place beans in wet cotton batting, and the children will be able to watch each step of growth.

Have a flower to examine when studying the different parts of the flower.

**Language and Reading.**—Be careful of children's written work. See that they put in practice the rules they have studied in regard to punctuation, capitalization, and paragraphing. Do not permit any careless work.

Have two imaginary stories written, also two stories written by following outlines.

During this month the class should cover contractions, relation words, connecting words, singular and plural number, and analyzing. Give drills to make these plain.

Remember the pronunciation and articulation drills. Draw attention to the difficult words in the reading lesson when assigning the lesson, and study them with the children.

#### FIFTH GRADE—Olive Severs

**Bible.**—1. In order to be sure that the lessons about Joash, Jehohaz, etc., are grasped, let each pupil write ten to fifteen questions of his own on the lesson. For a change, use these questions instead of the ones in the book.

2. Continue the diagram of kings, referring to page 254.

3. The additional readings given at the end of each lesson should not be omitted. If nec-

essary, take two days for a lesson, but be careful not to make the lesson monotonous. Make the same lesson so interesting that the children will be willing to spend three days on it. However, it is seldom well to spend more than one day on a lesson.

4. Keep reviewing past memory verses and the connections in which they are given.

**Spelling.**—Try a log cabin on your folder, a flag, or three stripes,—red, white, and blue. A hatchet with a bunch of cherries would also be appropriate.

**Reading and Language.**—1. Have children reproduce the story of "Peter Delivered from Prison," illustrating it by a free-hand reproduction of the sketch on page 209.

2. The poem on page 234 is an excellent one to memorize.

3. Help children to distinguish between the root or stem of a word from which the real meaning comes, and the prefix or suffix which is added to modify that meaning; as, *sym* (with) *pathy* (suffering).

4. Write on the board a list of two or three topic statements under a given title, and let pupils enlarge these into two or three paragraphs.

5. Work for conciseness and accuracy as well as freedom and ease in writing.

6. Stories of Lincoln and Washington may well be used for reproduction work.

**Nature.**—Love animals? Every child does. Do all you can to encourage a study of their appearance, habits, and use.

1. Study the common spider especially.

2. Make drawings of butterflies. Very good results may be obtained by giving children hectographed or traced copies of a butterfly with outstretched wings and allowing each to color it as he chooses. The one on page 292 makes a good model. These make a pretty and unique border around the room.

3. Read Deuteronomy 14 where the clean and unclean animals are enumerated.

4. Explain why animal flesh is not good food.

5. Let the children tell substitutes for meat.

#### SIXTH GRADE—Sara Rudolph

**Bible.**—In connection with the Bible lessons this month study the geography of Galilee. Make a map of Galilee of pulp or salt and flour and locate on it the places mentioned in the review. Compare ancient and modern Palestine. Continue the outlines of the life of Christ and review those of his earthly ministry. The reviews may be made interesting by using the Bible game, "The Life of Christ."

**Nature.**—The nature lessons this month may be used as lessons in character building. The comparison of the body with the temple at Jerusalem and of the work done in them is beautiful. Much has been written concerning the cost of the temple built by Solomon, and



here is an opportunity to tell the cost of the living temples of God—the life of his Son.

These lessons will be of greater interest if the pupils make drawings of the illustrations given with the lessons or in physiologies they may find in their homes.

Here are a few health rules:

1. Health is wealth.
2. Do not put pins in your mouth.
3. Do not hold money in your mouth.
4. Do not put your hands in your mouth.
5. Do not put pencils in your mouth or wet them with your lips.
6. Do not wet your fingers in your mouth when turning the leaves of a book.
7. Do not pick your nose or wipe it with your hand or sleeve.
8. Do not keep your rubbers on in school.
9. Do not sit with wet shoes or clothes on.
10. Do not exchange parts of apples, candy, chewing gum, half-eaten food, whistles, or anything that is to be put into the mouth.
11. Never cough or sneeze in a person's face. Turn your face to one side and hold a handkerchief before your mouth.
12. Before drinking, rinse out the cup, and then empty what water you leave into a basin or sink.
13. Keep your face, hands, finger nails, and teeth clean.
14. Keep the interior of your body clean by allowing nothing to go into it except good food and pure drink.
15. Study physiology to know how to use rightly and take proper care of every part of the body.

**Reading and Language.**—The first part of the reading is conversation. These lessons will be very easily dramatized and the pupils will enjoy them more if they are. The remaining part of the month's reading is mostly poetry. The habit of pausing at the end of every line of poetry can be broken by having the pupils group the words thus:

Freshly || the cool breath of the coming eve ||  
Stole through the lattice, || and the dying girl  
Felt it || upon her forehead. || She had lain  
Since the hot noontide || in a breathless trance.

For composition work the children may paraphrase one or more verses of the poems, to be read to the class in place of the verse. In connection with "Snow-Bound," study the life of Whittier, and have the children make a sketch of it in their composition books. Let them find and read in class a selection from some of his other books.

#### SEVENTH GRADE — Frances A. Fry

**Reading.**—Suggestive lesson plan. Assignment, John G. Paton, part 1, page 229, Reader Six.

**Lesson Unit.**—The power of a consecrated life.

**Interest.**—Did you notice the title given John G. Paton at the beginning of the lesson, "King of the Cannibals"? Doesn't that sound interesting? How we shudder at the very mention of cannibalism! Great and powerful nations have tried to crush this terrible practice among the savages of the South Seas but to no avail. What instances have we of the fact that these degraded people may become new creatures in Christ Jesus?

**Illustrations.**—Upon a wall map of the world locate the New Hebrides, Melbourne, Glasgow, Tanna, Aniwa.

**Word and Phrase Drill.**—"Of the most profound admiration," "Norwar a legacy of heroism," "with only short intervals of paternal care," "fever and ague catastrophes," "Aniwa."

(Have the class face the blackboard upon which this drill has been written. Mark diacritically all unfamiliar words. Have phrases given first individually, then in concert. Require explanation of all new terms. In this drill attempt to clear up all anticipated difficulties.)

**Articulation Drill.**—

And it was here  
When but a youth  
And led hundreds to forsake  
At last he was chosen  
But little progress had been made

(Teacher gives one phrase at a time, stressing special consonants; class watch teacher's lips closely, and then repeat phrase in concert.)

**Method.**—I shall ask questions to which I shall require a definite answer in the words of the book. (This places the reading lesson on a purely conversational basis.)

**Thought Questions.**—(To be interspersed as the children read, not as a means of securing expression so much as of testing the thought-getting ability of the class.)

Why was Mr. Paton called a "king"? Did the fact that Mr. Paton was of humble parentage lessen his chances for success? What evidences do we have that as a child God was preparing John Paton for his life work? When did Mr. Paton's career as a missionary begin? How complete is the change which Christianity is able to bring about in the heart of a cannibal?

**Geography.**—*Asia.*—Outline map sketching—apply the method set forth in previous notes. The following suggestive hints should be considered:

1. That East Cape is nearer the top of the map than any other point.
2. That India is due south of the Gulf of Obi.
3. That a line passing through the southernmost points of Arabia, India, and the Malay Peninsula is nearly straight.

4. That the Malay Peninsula is the southernmost point of the continent.

5. That there are six prominent projections on the eastern coast.

6. That a line almost straight can be drawn through five of these points; namely,—Kamchatka, Korea, China, Indo-China, and the Malay Peninsula.

It is not expected that the class will memorize these hints. Their function is merely to make strong the mental image of certain critical portions of the outline.

**Arithmetic.**—In attacking problem work where the original thinking is required, the pupils are often at sea because they have no idea of any definite procedure. In oral analysis the following suggestions are offered:

First: Require a careful reading of the problem as a whole, that the pupil may be intelligent as to just what is stated in the problem.

Second: Require the pupil to say "Given," and then to state all the facts given in the problem as his working basis. The pupil is now ready to say "Question," and to follow it with a statement of just what he is expected to find.

Third: Require the pupil to state next what operation or operations are involved in the working out of the problem.

Fourth: Require in round numbers an approximate answer from the pupil.

*Illustration.*—A man sold his property for \$4,200, which meant to him a loss of 20%. What was the original cost of his property? Given: \$4,200, selling price; 20%, loss.

Question: Find the cost.

The operations involved are subtraction and division. My approximate answer is \$5,000. Since the loss per cent is 20, the selling price per cent would be 80. Since 80 per cent of the cost equals the selling price, or \$4,200, the cost would equal  $\$4,200 \div 80\%$ , or the answer.

## EIGHTH, NINTH, AND TENTH GRADES—W. C. John

### EIGHTH GRADE

**Agriculture.**—"The development of the boy, not the radish, is the main issue." This is especially true for the smaller boys and girls, but when we reach the eighth grade, we will not neglect the boy's development if we can teach him to develop first-class radishes. The section of the school garden under eighth-grade management may be made to bring definite financial returns of such a nature as to stimulate the most vigorous activity on the part of most normal pupils. Eighth-grade boys are expert tradesmen when it comes to "swapping" knives and other gewgaws that come into the spacious maw of their pockets. When you have the produce, set your boys to marketing it and keeping accounts. Most profitable

review work in arithmetic can be obtained from the problems which naturally arise with the sale of the produce.

Organize a sales company with students as president, secretary, and treasurer. If there is a profit made after all expenses are taken out, devote a certain per cent to missions or to some other needy work. Keep a reserve fund for seeds and supplies the coming year. For correlated work see page 186.

*Home Gardens.*—Encourage the home garden not only from the educational standpoint but from the necessity of it in these times. Follow carefully the suggestions given in the textbook. Organize an inspection committee composed of the local elder and two other leading church members. The active support of parents should be gained at the teachers' and parents' meeting.

Co-operate with pupils and parents in choosing garden plots, and make the necessary preparations for an early start.

**History.**—Pages 378-447. Explain carefully the meaning of secession. For some time previous to the war the question had been discussed whether the individual States were so fully independent that they could, if they chose, withdraw from the Union. The election of Lincoln made the Southern States feel that they could no longer maintain the hold on the Government at Washington that they wished, so they seceded.

Compare carefully Buchanan's and Lincoln's attitude toward the doctrine of secession.

Outline the war first by years and then by campaigns. What are some of the elements that make up a military campaign?

Study the characters of leading men, as Lincoln, Davis, Grant, Lee, Sherman, Jackson.

Have read before the class the chapters on the Civil War by Mrs. E. G. White. These give an excellent study of the moral questions involved in the war, and are very profitable and interesting. See "Testimonies for the Church," Vol. I, pages 253-268; 355-368.

**Bible.**—An action of the Normal Council last August authorized for the Eighth Grade Bible, the use of the Elementary Doctrines in Mrs. McKibbin's Bible Lessons, Book Four, together with selected lessons from Daniel and Revelation. Part of our schools are following this plan, at the present using Bible Doctrines the first semester.

Not being able to have the lessons on Daniel and Revelation ready this year, we shall give here from month to month a suggestive outline of lessons to be used for this year until the lessons themselves can be developed.

*Suggestive Lesson Outlines in Daniel and Revelation.*—This series is composed of 90 lessons, 60 on the book of Daniel and 30 on the book of Revelation. The lessons average 6 verses in length. In certain cases where

the Scripture lesson is very short—one or two verses—the teacher will find it necessary to develop the lesson from the references closely related to it, both in the Bible and outside. The following references will be found helpful: Chapters 37 to 44 of "The Story of Prophets and Kings," by E. G. White; also the standard works on the prophecies published by the denomination.

Emphasize character study in the lives of Daniel and his companions. Point out the results of the evil ways of those who did not serve God. Endeavor to bring out the leading points of prophetic truth in simple fashion while correlating them with nations of general history.

LESSON	CHAPTER	VERSES
1	1	1-2
2		3-7
3		8-16
4		17-21
5	2	1-13
6		14-18
7		19-23
8		24-30
9		31-35
10		36-40
11		41-45
12		46-49
13	3	1-7
14		8-18
15		19-27
16		28-30
	and 4	1-3
17		4-12
18		13-18
19		19-27
20		28-37
21	5	1-7
22		8-16

NINTH GRADE

**Bible.**—Pages 133-151. Just as we have emphasized Christ's personality, let us emphasize the personality of each of the apostles under the guidance and power of the Holy Spirit. Note the elements that gave great power to the apostles. Wherein was the secret of their success? What are some of the values of persecution to the church? to the individual?

**Composition.**—Hanson's "Elementary Composition," chapters 13 and 14; also pages 177-191, 246-297, of Rine's "Essentials of English."

Many young students of composition feel it necessary to use long, high-sounding classical words rather than those which are short and simple. Often the shorter word is the stronger and more expressive. The majestic style of the Bible is to a considerable extent due to the large per cent of short Anglo-Saxon words it contains. Have the class read selections from the books of Genesis, Proverbs, Isaiah, and John. Count and compare the number of

words of one, two, and three syllables, excluding proper names. Find the number of words of more than three syllables. Select short passages from general literature or from the seventh reader and make similar comparisons.

While there are many synonymous words and expressions, there is always one that best tells the truth for the occasion. The appropriate use of words is highly important and is a mark of good breeding.

The following exercise, from Genung and Hanson's Composition, is very suggestive.

In each of these sentences choose the more appropriate of the two words suggested, and be ready to give a reason for your choice.

1. While he sat —<sup>1</sup> his lunch, his horse, taking fright at something —<sup>2</sup> down the street.
2. He —<sup>3</sup> a large sum of money toward the —<sup>4</sup> of the society.
3. He —<sup>5</sup> early last evening.
4. The —<sup>6</sup> were such that she decided to go home.
5. In the —<sup>7</sup> she —<sup>8</sup> the teacher not to punish her —<sup>9</sup> brother.
6. I have —<sup>10</sup> your theme with pleasure.
7. Homicide is sure to be detected —<sup>11</sup>.
8. He was —<sup>12</sup> the —<sup>13</sup> remarks imaginable.
9. That she should fail —<sup>14</sup>.

**Figures of Speech.**—Show by appropriate selections from the Bible and literature the effectiveness of these helps to expression. Some of the most interesting and forceful figures are found in the book of Job.

**General Science.**—According to the present plan outlined in "Council Proceedings," general science is to be taught in a half year. With this in mind, Professor Price has indicated by a star the chapters which may be omitted in the complete edition. A briefer edition is now available with a corresponding laboratory manual.

The purpose of the course is to give the pupil a first-hand acquaintance with different phases of nature and accompanying phenomena. On page 6 of the preface the author gives valuable pedagogical suggestions, which should be carefully followed.

The teacher may find the following recommendations helpful:

1. Insist on a clear statement of the theories and problems to be discussed.
2. Insist on carefulness in the definition of scientific terms.
3. Insist on individual participation in collecting specimens, material, and in making observations.

<sup>1</sup> Eating, partaking of.

<sup>2</sup> Ran, bolted.

<sup>3</sup> Contributed, gave.

<sup>4</sup> Resuscitation, reviving.

<sup>5</sup> Was translated, died.

<sup>6</sup> Exigencies of the case, conditions.

<sup>7</sup> Interim, meantime.

<sup>8</sup> Importuned, begged.

<sup>9</sup> Naughty, incorrigible.

<sup>10</sup> Read, perused.

<sup>11</sup> At last, eventually.

<sup>12</sup> Uttering, promulgating.

<sup>13</sup> Most demented, wildest.

<sup>14</sup> Was inevitable, could not be helped.

4. Whenever possible have the student answer the question in terms of personal experience rather than from the book.

5. Find out in what respects, if any, the pupil's experience differs from the written accounts.

6. Let the class work toward a definite end in collecting and recording scientific data as obtained from sources outside of the usual class work.

7. Start a school museum, which should reflect primarily the local environment.

8. Organize a class into a scientific circle to work out the above problems. Appoint student secretaries,—one to record facts dealing with unusual earth phenomena, such as contemporary earthquakes, volcanic eruptions; another those dealing with celestial phenomena, eclipses, appearance of comets or meteors, and unusual weather disturbances. Other contemporaneous phenomena, as the temperature pressure and humidity of the air, should be observed and recorded.

#### TENTH GRADE

**General History.**—Pages 474-563. Note the fact that the intellectual and moral reforms of the early modern age developed almost hand in hand.

Expand the "Comparative Study" given on page 496 by assigning to the pupils the different topics which are to be more fully developed in short essays and read before the class.

Discuss topic (e) in the light of Prof. George McCready Price's book on General Science. It is true that there are many important biological, chemical, and physical truths which have changed our concepts and our attitude toward life, but these are not to be confounded with the unbiblical teachings of evolutionary philosophy.

The students should read the chapters on the various phases of the Reformation as found in "The Great Controversy Between Christ and Satan," by Mrs. E. G. White.

Emphasize the essential features of the important edicts and treaties which are under consideration. These should be thoroughly mastered. If possible look up the edicts and treaties in their complete form.

**Rhetoric.**—Narration and Exposition. Some of the more important points to be emphasized in narration are as follows:

1. It should be complete; it should have a beginning and ending. This involves unity, coherence, and emphasis.

2. It should be full of action; that which strictly pertains to the purpose of the narrative.

3. It should be simple and addressed primarily to the feelings.

Exposition is deeper than narration; we are now seeking for reasons. Narration describes primarily the concrete, exposition unfolds the

abstract. It is therefore important that clearness be sought in exposition. Analysis of subject matter must be logical as well as coherent.

### Correlation of Agriculture with the Eighth-Grade Work in February

CONVERSATIONS on the kinds of soil in the community, and on the need, value, and methods of seed testing should be engaged in. For the slightly more advanced pupils oral and written narrations of the steps in making a seed-testing box should be required. Written descriptions of seed-testing boxes should be assigned as work for those still more advanced.

Conversations and oral and written statements concerning the choice of tools and the selection of garden plots should be given. A short composition may be assigned to all on the topic, "What I Consider an Ideal Garden."

**Reading and Spelling.**—The following selections are suggested this month for those schools where planting comes very early in the year. In the North they may be studied in March or April: "The Oak Tree," Mary Howett; "The Voice of the Grass," Sarah Boyle; "The Planting of the Apple Tree," Bryant; "Woodman, Spare That Tree," G. P. Morris; "The Parable of the Sower," the Bible; "How to Plant a Tree," Julia E. Rogers; and "Plant a Tree," Lucy Larcom.

Such words as the following will appear in the correlating exercises of the month: Seed, testing, checks, production, germination, humus, filter, clay, soil, sand, clods, gravitational, capillary, mulch, embryo.

**Drawing.**—Make drawings of different kinds of seed testers of germinating grains, both weak and vigorous, of diseased parts of plants showing affected parts.

**History.**—The history of the practice of testing seed in the community and county, showing the different methods employed, and the effect in crop production, should be studied. A study of the different fruit crops of the community

(Concluded on page 189)

# HOME EDUCATION

Fathers and Mothers, you can be educators in your own homes.—Mrs. E. G. White.

## Nature Month by Month

WALTON C. JOHN

A PURPLE cloud hangs halfway down;  
Sky, yellow gold below;  
The naked trees, beyond the town,  
Like masts against it show.

Bare masts and spars of our earth ship,  
With shining snow-sails furled;  
And through the sea of space we slip,  
That flows all round the world.

—Edward Rowland Sill.

### February

*The Heavens.*—Some bright crisp winter night let us go out and look for the constellation called Orion. This is one of the most beautiful groups of stars in the heavens. Another constellation that we can easily recognize is Pleiades, or what we commonly call "The Seven Sisters." This group is composed of a number of small stars, six or seven of which are distinct and clear.

*The Animal Kingdom.*—In some of the warmer parts of the country we can watch for the return of the birds. But in the north we shall see little of interest us. We shall have to depend on good old "Dobbin" and the cows and sheep for the study of animal life. Let us compare these animals and tell the many ways they help us.

The horse, next to the dog, is man's best friend, but the horse is more useful. He hauls our produce to market, takes us on his back and proudly gallops off with us. He plows our fields and helps us get ready for the spring planting. Horses, if kindly treated, are very good outdoor pets. They like sugar.

The hide of the horse gives us a valuable leather, and the best horsehairs taken from the tail are used in making violin bows.

The cow also is a valuable friend to man. The lives of millions of children depend upon the milk and butter she produces. She also gives us many other products which are of daily use.

The sheep is another one of our friends. It gives us warm clothing.

Lambs and sheep often make good pets for boys and girls. We all remember the story of Mary and her little lamb.

### SUGGESTIVE QUESTIONS

(To be answered by the child after making observations.)

1. How many kinds of horses do you know? Mention the different colors of horses.
2. What horses do you know that prefer to trot, to pace, or to gallop?
3. Mention some of the uses of the horse.
4. What kind of cows have you? Mention their colors.
5. Which kind gives the best milk? The most milk?
6. What are some of the important uses of cattle?
7. What kind of sheep have you? Are any of them pets?
8. When will the wool be cut? How will it be cut?
9. Which animal helps us most in our work?
10. Which animal helps us most with food?
11. Which animal helps us most with clothing?

*The Mineral Kingdom.*—For several months we have been studying the animal and vegetable kingdoms, but now we shall give some attention to the mineral kingdom. This kingdom is very important, because without it neither the vegetable nor animal kingdom could exist. The rocks, earth, and soil are a large part of this kingdom. If you pick up a piece of quartz or crystallized rock, or a handful of sand, you have a mineral known as silica, in fact nearly all the soil contains a large amount of silica. Glass is also made of silica. But the earth is full of other interesting minerals. The most important are metals like iron, tin,

lead, copper, silver, gold, and platinum.

The Lord has given us all of these wonderful metals to help us. Think of the many uses of iron, copper, tin, gold, and silver. What would we do without iron and coal? Thousands of men spend their lives digging in the earth to find rocks that contain these valuable substances. The rocks are crushed in a big crusher, and then put in big ovens where they are melted in very hot fires. The white iron or copper is poured out into small sand troughs where it cools and is then ready for use.

#### SUGGESTIVE QUESTIONS AND ACTIVITIES

1. What articles have you in the house or school made of gold; of silver; of copper; of lead; of quicksilver or mercury; of aluminum; of tin; or of iron?
2. Which are the most expensive? Which are the most beautiful?
3. Which metals weigh the most? Which weigh the least?
4. How many kinds of soil and rocks do you have in or near your place?
5. Look for pieces of rock crystal near the banks of creeks or rivers.
6. Go to a jewelry shop and look at the different kinds of precious stones.

### Mary and Her Little Lamb

THOUSANDS of children have been delighted with the nursery tale about Mary and the lamb which followed her to school one day, much to the amusement of the other pupils and the discomfiture of the teacher. The story is still cherished by thousands, both youngsters and grown-ups. It is not generally known, however, that there was a real Mary and a real lamb, originals of the jingle. T. C. Purdy, of De Land, Fla., furnishes the *Pathfinder* with the following interesting facts about them:

Mary Sawyer, the heroine of the story, was born on her father's farm near Sterling, Mass., in 1806. The old home is still standing. One cold morning in March, 1814, Mary's father found at the sheepfold a pair of twin lambs that had been born in the night. For some reason the mother sheep rejected one of them and it was nearly dead from cold and hunger when found by Mr. Sawyer.

Mary begged the privilege of caring for the lamb, and it was given into her hands to raise. By careful nursing and judicious feeding with milk and minted teas, the little girl saved its life, and in a short time she and the lamb were devotedly attached to each other.

It was not long until the lamb became as lively as any you could wish to see. It was Mary's constant companion and playmate, taking the place of a doll in her play. Frequently she would dress it up in clothes just as other little girls dress their dolls. One day as she went off singing on her way to school the lamb heard her voice, broke out of its pen, and was soon at her heels.

Mary's brother suggested that she let the lamb go with them to school, and she did so. Arriving some time before school began, she placed the lamb under the seat, where it lay quietly and contentedly. All went well until it came time for Mary to go to her class. Then, as she walked up the aisle, her pet got up and trotted along behind her, to the delight of the pupils and the surprise and discomfiture of the teacher.

What else would be expected than that it would make "the children laugh and play to see a lamb at school"? The discipline of the school could not be sacrificed for the fun of the pupils, so the pet lamb was put out of doors, where it had to wait for its mistress.

Visiting at the school that day was a young man named John Roulston, a Harvard University student. The incident impressed him as so funny, yet pathetic, that he was inspired to write the first three stanzas of the well-known classic, "Mary had a little lamb." Roulston has never been classed among the poets of the country, but he certainly ought to be remembered for immortalizing this incident.

In due time the lamb became a sheep. The first shearing of wool from its back was spun into yarn, from which Mary's mother knit her two pairs of stockings. These she kept until she was eighty years old. Some time after reaching maturity the sheep was gored by a cow, and on

Thanksgiving Day, 1815, died with its head resting in its little mistress's lap.

When Mary grew up she became matron of a hospital in Boston, and later was married to Columbus Tyler, the superintendent. In later years Mrs. Tyler unraveled the stockings made from the wool of her childhood pet and sold the yarn in the form of little bows, fastened to cards above her signature, for the purpose of raising funds for the old South Church in Boston. She died Dec. 10, 1889.

### Correlation of Agriculture with the Eighth-Grade Work in February

(Concluded from page 186)

and county as to their introduction, success or failure, and why, should be made. The history of plant diseases and insects, showing how and when introduced and the successful and unsuccessful methods of combating them, may constitute part of the correlation work of the month.

**Geography.**—The correlation work in geography for the month should consist in naming and locating the farmers of the community and county who have practiced seed testing. Name and locate the plant diseases that obtain in the community and county, setting forth the conditions favorable and unfavorable to the propagation of the same, and the effect that the appearance of these diseases and insects have had upon the agricultural interests. What conditions of climate, altitude, and soil obtain favorable and unfavorable to fruit growing.

**Arithmetic.**—While testing seeds find the percentage of good seed. For the younger pupils work may be assigned involving the determining of the number of checks in seed testers, the cost in time and material of making them, and the value of the time spent in testing seed. For more advanced pupils problems should be developed involving the value of testing seed, the value of the time spent in such work, and the loss that would be sustained in poor stands by failure to do it properly. These processes may be multiplied to include as many principles of arithmetic as desired.

### Some Garden Rules

(Concluded from page 177)

in April and are set out after the tenth of May: Aster, balsam, cockscomb, larkspur, petunia, sunflower.

3. Vegetable seeds that should be started indoors: Early cabbage, parsley, tomato.

4. Vegetable seeds that may be sown as soon as the ground is fit to work in the spring: Beet, carrot, lettuce, onion, parsnip, pea, radish, spinach, turnip.

5. Vegetable seeds that should not be sown until the ground is warm and all danger of frost is over: Bean, corn, cucumber, muskmelon, squash, watermelon.

### Depth of Sowing

1. Flower seeds that should be planted not over one-half inch deep: Alyssum, balsam, candytuft, cockscomb, four-o'clock, larkspur, mignonette, morning-glory, pansy, petunia, poppy, scabiosa.

2. Flower seeds that should be planted one inch deep: Aster, bachelor's-button, calliopsis, marigold, phlox, pink, verbena, zinnia.

3. Flower seeds that should be planted two inches deep: Nasturtium, sunflower, sweet pea.

4. Vegetable seeds that should be planted one-half inch deep: Cabbage, carrot, cucumber, lettuce, muskmelon, onion, parsley, radish, tomato, turnip.

5. Vegetable seeds that should be planted one inch deep: Beet, parsnip, pumpkin, spinach, squash, watermelon.

6. Vegetable seeds that should be planted two inches deep: Bean, corn, pea.

### Thinning and Transplanting

1. Flowers that should be four inches apart: Alyssum, balsam, candytuft, poppy.

2. Flowers that should be six to eight inches apart: Bachelor's-button, dianthus, four-o'clock, mignonette, morning-glory, pansy, phlox, sweet pea.

3. Flowers that should be twelve inches apart: Aster, calliopsis, cockscomb, larkspur, marigold, nasturtium, petunia, scabiosa, verbena, zinnia.

4. Flowers that should be eighteen to twenty-four inches apart: Sunflower.

5. Vegetables that should be six inches apart: Beet, lettuce, parsnip, parsley, spinach, turnip.

6. Vegetables that should be twelve inches apart: Snap bean, cabbage.

7. Vegetables that may be sown thickly: Carrot, onion, pea, radish.

8. Vegetables that should be two to three feet apart each way: Corn, Lima bean, tomato.

9. Vegetables that should be three to five feet apart each way: Cucumber, muskmelon, pumpkin, squash, watermelon.—*C. E. Hunn, in Cornell Rural School Leaflet.*

# CHRISTIAN EDUCATOR

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Takoma Park, Washington, D. C., February, 1918

Subscription Price - - - - - \$1.00  
Single copy - - - - - .10  
No subscription accepted for less than a half-year.

Published monthly by the

REVIEW AND HERALD PUBLISHING ASSN.  
WASHINGTON, D. C.

Entered as second-class matter, September 10, 1900, at the post office at Washington, D. C., under the act of Congress of March 3, 1879.

## School Notes

SOUTHERN JUNIOR COLLEGE was the happy recipient in the early winter, of 500 bushels of wheat and 500 bushels of potatoes, donated by friends in Colorado.

Lady Eglantine, a white leghorn hen belonging to A. A. Christian, of Philadelphia, holds the world's record as an egg layer, having 314 eggs to her credit in 365 days. She is valued at \$100,000.

The 144 children of Walla Walla College Model School raised \$144 for the Harvest Ingathering fund through summer gardens, chickens, and the doing of errands. The total amount for this fund raised by Walla Walla College was, at the last report, \$646.68.

Washington Missionary College is conducting a choristers' training class to help meet the constant need of young men competent to lead the singing in tent and other evangelistic efforts. This is a most laudable undertaking, and we shall eagerly watch the results.

The latest figures we have from Emmanuel Missionary College on the Harvest Ingathering show \$1,031.51, which is more than double the goal assigned them by the union conference committee and accepted by them. This is the best school record of which we have learned.

Principal Paap of Lodi Academy, sends the following encouraging words concerning the school farm: "During the past fall we harvested good crops. We received over \$1,000 for table grapes from the school vineyard, grew all the alfalfa necessary for our dairy herd and the horses, and practically all the 1,500 gallons of fruit and vegetables that we put up was produced on the school farm."

## Books and Magazines

"CIVICS AND HEALTH" lays the groundwork for safeguarding the health of the community, especially of school children, and gives methods which will help to successfully combat the unhygienic conditions prevalent in many cities and towns. There are forty-one chapters, divided into five parts: "Health Rights;" "Reading the Index to Health Rights;" "Cooperation in Meeting Health Obligations;" "Official Machinery for Enforcing Health Rights;" "Alliance of Hygiene, Patriotism, and Religion." A good book for students and teachers of hygiene; broad in scope; complete in treatment of problems; and full of stimulating material. By William H. Allen, Secretary Bureau of Municipal Research. Published by Ginn & Co. 471 pages.

"THE ESSENTIALS OF CHILD STUDY" gives in a condensed form the essential facts of childhood which concern the native growth and development of the child from birth to adolescence. The thirty-three chapters include the following topics: The Child at Birth and Its Care; The Physical Child, including Health, Growth, Food, Exercise, Rest, Sanitation, the Nervous System. Studies on the development of the special senses; Feeling, Knowing, Ideas of Self, Children's Interests, Methods of Child Study, Moral and Religious Training, and the Music Sense of Children and Its Cultivation. Teachers and students of education will appreciate the ample bibliographies given at the close of each chapter. By George Washington Andrew Luckey, Ph. D., Dean of the Graduate School of Education, University of Nebraska. Published by the University Publishing Company, Chicago and Lincoln. 219 pages.

"POPULAR GOVERNMENT, ITS ESSENCE, ITS PERMANENCE, AND ITS PERILS." This important book clearly discusses some of the fundamental problems of government which are implied in the Preamble of the Constitution. The value of Initiative and the Referendum is not only treated from the theoretical viewpoint but also in the light of recent experience. Professor Taft's experience as a judge, civil governor, Cabinet officer, and as President, gives weight to the criticisms offered with respect to political innovations which affect the fundamental law of the land. The style of the author is excellent, and there is not a dry page in the book. By William Howard Taft, Kent Professor of Law, Yale University. Yale University Press, New Haven. 283 pages.

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