

CHRISTIAN EDUCATOR

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by Willard S. Small, Ph. D., Principal
Eastern High School, Washington, D. C.

A historical and introductory study of Health Supervision in Schools. The problems of School Sanitation are clearly stated and discussed in the light of the most recent advances.

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ARE YOU A SUBSCRIBER?

IS YOUR NEIGHBOR ONE?

IF NOT, ASK YOURSELF WHY.

INAUGURATION VIEWS



1 2 3 4 5 6

PRESIDENT WILSON TAKING THE OATH OF OFFICE

1. Senator Saulsbury, president pro tempore of the Senate; 2, 3. Vice-President and Mrs. Marshall;
4. Chief Justice White; 5. The President; 6. Mrs. Wilson.



Courtesy National Remembrance Shop, Washington, D. C.

THE INAUGURAL PARADE

In this picture is shown the Marine Band followed by the West Point Cadets.

CHRISTIAN EDUCATOR

Vol. VIII

Washington, D. C., April, 1917

No. 8

Health Supervision in American Schools

BY WILLARD S. SMALL, PH. D.

Principal Eastern High School, Washington, D. C.

Mens sana in corpore sano is a time-honored truism, but in the history of education it has been honored quite as much in the breach as in the observance.

We have been slow to recognize that the Declaration of Independence and the Constitution, in formally guaranteeing us the right to life, liberty, and the pursuit of happiness, left to us the duty of discovering and making real that most fundamental condition to happiness — health. We are prone to look upon health as a native gift, like the color of our eyes or the size of our feet, whereas, in fact, health is an acquisition, like knowledge, depending upon ideals, perseverance, and effort. It is not strange, therefore, that one can say truly:—

“Until recently children were treated in the schools as though they were disembodied spirits. The grossest physical defects were overlooked, little attention was paid to the possibility of lowering the high mortality during the school years, and instruction in physiology amounted to little more than the memo-

rizing from textbooks of anatomical detail. Only a few years ago there was no city in the United States which maintained any system of school medical inspection.

School nursing had not yet become a profession, and school dentists did not exist. Only ten years ago there was hardly an open-air school in the length and breadth of the United States. There were no schools for crippled children, no classes for stutterers, and almost no special provision for other types of exceptional children. School shower baths, swimming pools, drinking fountains, adjustable seats, vacuum cleaners, and modern meth-



Clinedinst Studio, Washington, D. C.

DR. WILLARD S. SMALL

ods of heating and ventilating were only beginning to be introduced, and practically all the school buildings erected more than a decade ago are now recognized as unhygienic in many particulars when compared with modern standards.”

But a revolution is taking place in our attitude toward the relation of health and education. We are coming to look upon the school that does not conserve and

promote the health of the pupils, not merely as an inefficient school, but as a positive evil. We are demanding that the schoolhouse shall be sanitary, that communicable disease shall be controlled, that remediable physical and mental defects shall be discovered and remedied, that wholesome and upbuilding physical exercises shall be included in the school program, and that children shall be taught to value and practice hygienic living.

Many causes have contributed to this change in the public attitude toward the health-promoting function of the schools.

One of the most influential has been the effective operation of compulsory education laws. Two entirely unforeseen results flowed from compulsory education.

In the first place, the bringing together of large numbers of children from diverse places and conditions provided a center for the spread of communicable diseases. No better means could have been devised. As a corrective of this evil, the medical inspection of school children was adopted. The beginning of medical inspection of schools in this country was in Boston in the year 1894. It was for the detection of cases of contagious disease in the schools, in the interest of better protection of the public health. Other cities quickly followed suit. At the present time, twenty-seven States have State laws relating to medical inspection of schools, and more than seven hundred cities have medical inspection in more or less successful operation.

The broadening of the scope and purpose of medical inspection of schools is as striking as its geographical extension. To its work with infectious diseases was quickly added the work of caring for skin diseases and uncleanness. Next it began the examination of children for the discovery of defects and infirmities that retard development and reduce the school efficiency of children. Soon it essayed the task of examining all pupils, not only for the purpose of diagnosing seriously defective conditions, but also

for the purpose of charting, as it were, the physical values of all pupils.

Coincident with this work of examination and investigation has developed an appreciation of the real significance of medical inspection. Its true mission is seen to be the general upbuilding of the health of children in school. Medical inspection is fast becoming health supervision. It is formulating a comprehensive program for the conservation of the health and efficiency of children in the schools. It is organizing agencies not only to remedy defects and to effect cures, but also to improve hygienic conditions of school life.

In the second place, the enforcement of compulsory education laws brought into and kept in the schools a vast number and variety of children who previously had evaded the beneficent ministrations of schools and teachers. The problems of "retardation," "backward children," and "exceptional children," now began to be troublesome. As indicated above, it was not long before medical inspection began to take cognizance of these problems.

Another cause contributing to the change of attitude has been the great social welfare movements. The necessity of the school nurse was not discovered by the schools, but by the social workers. Of what use was it to exclude children from school for sickness if they were not so looked after as to prevent them from spreading disease and to get them cured? The settlement workers in New York first asked this question, and answered it by creating the school nurse. The great antituberculosis movement, with its efficient organization for combating the white plague, has not only combated this dread disease, it has also, of necessity, carried on a campaign of general health education, and has in many ways shown the necessity of constructive health work in the schools. The social welfare agencies that have contributed to this work are legion.

A third influential cause is the preparedness movement. This is something

more than technical military training and military equipment. The fundamental note in the preparedness symphony was struck when President Roosevelt's Commission on the Conservation of National Resources included in its findings a report upon national vitality. Conservation of the nation's health, the upbuilding of the nation's vitality by economic adjustment, and sound educational practice are the foundations of preparedness for both peace and war. It has required, however, the scourge of fear, born of the horrors of the great war, to bring home and make vivid to us this simple fact. The statistics of rejection of applicants for enlistment in the army and navy have been available for years, and have been quite as significant heretofore as they were in 1916. Under the stimulus of the preparedness issue, they were suddenly exploited and uncritically interpreted as symptomatic of physical degeneracy of the nation. In interpreting these figures it must always be remembered that the physical standards for recruits are very rigorous, and that most of the recruits in time of peace are young men who are temporarily out of employment, this second fact carrying the implication of a large admixture of physical incompetency. Allowing for these facts, however, the figures are sufficiently impressive.

In the year 1915 there were, in round numbers, 160,000 applicants for enlistment in the United States Army. Of these, 117,000 were rejected upon preliminary examination, and 7,000 of the remaining 43,000 were rejected upon detailed medical examination; 30,000, or about 20 per cent, were accepted.

The records of the Bureau of Medicine and Surgery, United States Navy Department, for the year ending Dec. 31, 1914, show that of the 72,410 applicants for original enlistment in the navy and of 20,674 in the marine corps, 76 per cent of the former and 82.4 per cent of the latter were rejected for physical and mental disabilities; and that during the year ending Dec. 31, 1915, there were 73,028 applicants for original enlistment

in the navy, and 21,676 in the marine corps, of whom 75.4 per cent were rejected by the navy, and 83 per cent by the marine corps, for like causes.

The really impressive thing revealed by these figures is not that they demonstrate or even suggest physical degeneracy, but rather the fact that a very large part of the disabilities recorded are of "such nature that they might have been corrected or prevented in childhood by health supervision in the schools, adequate medico-physical examination, corrective follow-up work, proper exercise and instruction in personal hygiene, and hygienic environment." Practically 50 per cent of the specified disabilities recorded by the navy and 40 per cent recorded by the marine corps would have yielded to remedial measures in childhood.

It is this formidable fact—that the educational organization has tolerated physical inefficiency, even if it is not a contributing cause—that the interest in preparedness is bringing acutely to the national consciousness. The realization of the folly and extravagance of such a lack of policy will become more vivid in the next two or three years. Professional educators will be a trifle ashamed of "resolving" at educational conventions that health is of paramount importance in education, and forgetting about it when they return to their own routine. School boards and boards of estimate will be more likely to see the folly of spending large sums "now devoted annually to the re-education of children held back in their classes in part, at least, by incapacitating, though preventable and curable, physical and mental defects," and will think twice before making appropriations for health work in the schools on so penurious a scale that the work is crippled at its birth. Schools under private management will recognize not only the duty but also the necessity of providing fully and adequately for the physical welfare of their students. The public, at least the thinking part of the public, will perhaps shake off its good-natured indifference, and recognize the

validity of the health programs urged by earnest school and health administrators and by civic and philanthropic agencies. There is sufficient movement of the waters in many places to justify the hope, at least, that out of the preparedness upheaval there may be developed a genuine reconstruction of policy in regard to the place of health in education.

Every school and every school system, if it is to do its honest part in the physical upbuilding of its community, must do at least four things in the interest of health:—

1. It must be housed in buildings that measure up to reasonable sanitary standards; and after it is so housed, it must see that the standards are observed by those who operate the buildings. The minimum standards adopted in Philadelphia¹ are not ideal, but are purposely made so low that they cannot be criticized as unreasonable. Any schoolhouse can be easily measured by this standard.

2. It must provide a system of medico-physical examination which will provide securely against the spread of communicable diseases, and will discover and remedy remediable physical defects. This means, at least, an annual examination, and persistent following up of defective cases. An example of what can be accomplished is shown in the following table of results obtained in Orange, N. J.:—

Year	Number examined	Normal		Abnormal		Recommended for Treatment					
		Number	Per cent	Number	Per cent	Number	Per cent	Treated		Not treated	
								Number	Per cent	Number	Per cent
1909-10.....	3,606	2,481	69	1,125	31	461	13	323	70	138	30
1910-11.....	3,808	3,500	92	308	8	196	5	102	52	94	48

It is shown that in the first year, 70 per cent of those needing treatment "received proper care and attention;" that in the first year, 13 per cent of all the

children examined (which was all in school), needed treatment, but only 5 per cent in the second year; and that, whereas at the end of the first year 138 pupils needed treatment who had not received it, at the end of the second year there were only 94. The report states that nearly one half of these 94 were cases left over from the preceding year, "children over whom we shall have to work for years until the parents are educated to the point of acknowledging their children's defects or until their financial condition allows them to consult their own physician instead of going to a dispensary as a charity patient."

3. It must provide proper physical training for all pupils. This implies, not merely regular and systematic exercise, but exercise adapted to the varying needs of varying groups and individuals. If the kind of physical examination mentioned above is in effect, the facts upon the basis of which exercise may be intelligently directed are at hand. If not, the least that should be done is to conduct a more superficial examination that will show height, weight, and lung capacity. An excellent form for recording such measurements has been devised by Prof. B. T. Baldwin, of Swarthmore College. Dr. Baldwin has formulated standards for physical growth in height, weight, and lung capacity. These are in the form of cards which may be used as a meas-

uring scale for physical growth and stages of physiological maturity, as well as for records concerning physical conditions.

With pupils of high-school age, frequent examination and careful supervision of exercise are especially necessary,

¹ See "Reports of Division of Medical Inspection of Schools," Department of Health and Charities, for years 1914 and 1915. See table on page 247.

because of the danger of overstrain in athletics. Military training without such examination is dangerous.

4. It must provide simple and practical means of teaching children the value of hygienic living. To do this it is necessary to enlist the active interest of children in their own health and growth. Such methods as the "Efficiency Methods for Posture" produce excellent results. These methods, worked out in Brooklyn several years ago and now used throughout New York City, afford, through a triple test which all class teachers conduct, a standard measurement for judging attainment and progress in this phase of physical development. Once each month each class in the New York City schools is given a so-called triple test for posture, the class is grouped on this basis, and a percentage record kept of the number passing the test.¹

In closing this study, attention is called to two valuable plans by which children may grade their own progress in hygienic habits. One has been worked out by Dr. E. F. Brown, of the Division of Child Welfare of the New York Society for Improving the Condition of the Poor; the other is the

¹ For complete treatment of the subject, see "The Posture of School Children, with its Home Hygiene, and new Efficiency Methods for School Training," by Bancroft (Macmillan).

Case-System of Hygiene devised by Dr. H. W. Haight (The Case-System Co., Princeton, N. J.). The essence of the latter method is to present for each lesson a concrete problem to be solved by the pupils. The following example is from the seventh-grade book of the series:—

"Harold L., aged sixteen years, while crossing the street, was compelled to dodge a fast-flying motor cycle. Neither he nor the driver was knocked down, but the machine ran over the toes of his left foot, and took most of the skin off the top of the fourth and little toes. He cleaned the toes up with peroxide and bound them up with some clean white rags. After that he went on playing baseball, going in bathing, and dancing just as usual. Most of the time there was no bandage over the toes. What danger was the young man in?"

Among the important books on this subject are Rapeer's "Educational Hygiene" (Scribner's), Terman's "The Hygiene of the School Child" (Houghton Mifflin Company), Hoag and Terman's "Health Work in the Schools," and Dresslar's "School Hygiene" (Macmillan). The U. S. Bureau of Education and the U. S. Public Health Service publish important bulletins upon various phases of the subject.

What Should an Eighth-Grade Girl Know About Sewing?

BY RUBIE OWEN

IN making out a course of study in any subject, it is a great help to keep in mind what you expect the pupil to know at the end of the year or at the end of the course.

When a girl finishes the eighth grade, what should she be able to make? The question can be answered best by telling what students in the eighth grade are accomplishing in many schools where home economics have had an established place on the school program.

While passing through the intermediate grades a girl has made a large number of articles which are used about the home,—table linen, a bureau cover, towels, pillow cases, a table runner, mats, bags, etc. Besides these she has made a number of articles for personal use; and in the sixth grade, in addition to the handmade articles, she has two or three pieces of underwear.

In the seventh grade, sewing was dropped out, and all the time was given

to cooking. Personally I favor this plan, which is now being followed by a number of home economics teachers.

In the eighth grade we find her making underwear, a kimono, a bungalow apron, and a simple dress for the last day of school. These results are no longer a talked-of theory or an ideal, but a reality. Some courses include the making of a simple hat.

The longer we work along these practical lines, the more we shall be able to accomplish with our pupils, and the more pleasure we shall find in being able to help the girls better to perform the duties which are to become a part of their very lives.

Where should machine work be taught? This question is often asked, but cannot be answered always in the same way, for it depends very largely on the strength of the elementary work. The efficiency of the first two years counts for more than age or grade. The machine should be introduced as soon as garment construction begins.

All the foundation stitches are taught in the first two years of the course. When this work has been well covered, the making of garments requiring the machine could easily be carried along parallel with handwork for the rest of the course. It is not profitable to make by hand garments that can be made by machine. Since handwork is the basis of all garment construction, it is a mistake for children to be allowed to use the machine before learning to sew well by hand. Such children will do poor constructing.

To be able to make even simple garments is a great saving. It has been said by one of high authority that "homemade garments usually wear twice as long as boughten ones, for they are apt to be made of better material, and are better cut and made."

As not all schools are equipped for machine work, a bit of personal experience may be of help to some teacher who has laid a good foundation in handwork and would like to introduce some

garment making. First I give general instruction on the care and use of the machine, explaining very carefully the adjusting of the upper tension to make a perfect stitch, and then let pupils take their stitching home. At the next lesson after the general instruction has been given, I look over the stitching and make suggestions for improvement. This plan is not ideal, but proves very satisfactory. Mounted samples of good machine work, which can be passed around as you give your instruction, are a great help.

With the question of garment making comes the one of drafting, and the use of the commercial pattern. In the last few years the commercial patterns have been greatly improved, especially the guide charts that come with them, by means of which they are more easily understood. For this and other reasons, drafting is taught less and less in a school course. What little is taught is given only as a means of interpreting patterns and adjusting them to one's needs. It is better, therefore, to leave drafting for the first year of high school.

One writer says: "The grades should stress practice and the high school should stress theory. Both phases, however, belong in both periods. It is a difference of stress. The grades should get technique to the point of unconsciousness, if possible."

Practice work should precede a garment or article when a new principle is to be used, but should be employed entirely as a means to an end and not an end in itself. To spoil a garment by learning new stitches on it is discouraging and a waste of material. Some will need more drill than others, but do not keep children at one stitch till perfection is reached, before using it on some article. It is more important for the children to be taught to construct than for them to continue to learn new stitches. It is better for a child to make a number of simple articles, even in an imperfect way, than to repeat the same stitches till she is tired of them. Do not sacrifice the interest of the child to the model by

demanding overaccurate work. Every article made should be for use, and nothing should be made for the sake of making something. Because in the normal course many articles are made in a reduced size, to save time, money, and a bulk of material to be carried around, many have not understood that it is a matter of convenience only, and that in the teachers' lesson plans, the full size is always given.

The prerequisite for the normal course in sewing is one year of sewing, which includes the technique of all the common stitches and seams; garment construction, including the making of simple dresses, the use of commercial patterns

and how to adjust them; and the study of fabrics and the hygiene of clothing. This prerequisite course more than covers the garments made and instruction given in the grammar grades, so that the one semester devoted to normal sewing is spent largely in covering the hand-work problems given in the intermediate grades.

Not much is gained by beginning regular sewing lessons in the primary grades. Good work can be done, to be sure, but the opinion is quite general now that the time can be more profitably spent in other lines of industrial art, which give the hand training that makes for greater progress in sewing later on.

Physical Culture Drills

BY JEAN B. HENRY

THE lessons throughout are based fundamentally upon the laws of progression, that is, from the simple to the complex, and from the mild to the strong.

Arm Exercise.—Raise the arms forward (shoulder high) on count 1.

Swing them swiftly to the side (shoulder high) on count 2.

Continue for 8 counts. Do not allow the arms to pass the lateral position when swinging them sideward.

Variation.—*a.* Raise the arms sideward (shoulder high) on count 1.

Swing them swiftly to the front on count 2.

Continue for 8 counts.

b. Raise the arms forward on count 1. Tense the muscles and move arms slowly sideward on counts 2, 3, and 4. Repeat.

c. Raise the arms sideward on count 1.

Tense the muscles and move the arms slowly forward on counts 2, 3, and 4. Repeat.

It is well to tell the pupils to imagine they are pulling or moving a heavy weight in these last exercises.

Breathing Exercises.—Take a deep breath, and exhale.



Take another deep breath, place the hands behind the head, exhale, hands down.

Repeat several times.

When the hands are behind the head, the elbows should be shoulder high and well back.

Trunk Exercise.—With hands on the hips, take a short step forward with the right foot on count 1.

Bend the trunk to the right on count 2.

Straighten trunk on count 3, and replace foot on count 4.

Repeat 4 times in all.

Change and step forward with the left foot, and bend to the left; straighten, and replace foot, 4 times in all. Alternate left and right.

Variation.—*a.* Step forward with the right foot on count 1.

Bend left on count 2.

Straighten on count 3.

Replace right foot on 4, 4 times in all.

Change and step left and bend right.

Straighten, and replace, 4 times in all.

b. This may be varied by having half the rows of pupils bend to the right and half to the left, and vice versa; or by having one row bend right and the next left, and so on.

Leg Exercise.—Point the right foot obliquely

(Concluded on page 254)



EDITORIALS

Health in Our Schools

FOUR things tend to menace the health of students in the school home,—confinement indoors, lack of exercise, ill-prepared and ill-served food, inadequate bath facilities. Any one of these is serious, but when several of them are combined in the same home, the situation is intolerable, and should have immediate attention.

The nature of a student's work tends to keep him indoors in his private room, the classroom, library, laboratory. The unsophisticated Indian told more than he thought when he diagnosed the cause of his sickness as "too much house." Too much house is killing many a white man who professes himself wise, is weakening the efficiency of otherwise good teachers, is impairing the developing constitutions of boys and girls. For this very reason, two things must be done for home students while responsibly under our care,—provide them proper ventilation; thrust them out of doors. We put the most modern and perfected ventilating devices into the dairy barn, but shut up our boys and girls in rooms without even a transom, or with one that will not work, and with windows so ill-fitting they will not shut out cold drafts at proper times, or if opened when necessary, throw a direct draft on the occupant of the room, when a simple and all but costless window board would throw the draft upward and prevent colds or something worse. We cleanse the stalls of our registered Holstein herd so thoroughly twice a day that we boast that one could eat his dinner there without offense, yet send our boys and girls to crude earthen vaults or unkempt water toilets that go without care day after day.

Why this difference? Why let our students lapse into indoor habits and not thrust them out into the open air at proper times to save their lives?

We heard a general worker say not long since that he settled it with himself several years ago that he would wear patched clothes if necessary, but he would not live on an impoverished or ill-cooked diet. He was wise, and he might have added, "nor go without sufficient bathing." Why cannot every boarding school act on the same principle? The kitchen should be the nucleus and first consideration of every school home that is built, the proper bath facilities should be added next, then put what is left into the rest of the building.

As to the cooking, the Spirit of prophecy has said of our first college, that "of all the positions connected with that school, the one of first importance is that of the one who is responsible for preparing the food to set before students." Then the first step in making up a faculty is to make sure of a first-class cook, then secure as many others as funds will allow. This would mean the elimination of too much mixed and sloppy food; flat, tasteless food; ever-recurring sameness of food; all starch and no natural oil in food; the serving of hot food half cold—all, too, with little extra cost, if any; but if it costs more, take it out of something less essential, or charge more.

Another thing we will not do, is to serve the midday meal at one or one-fifteen, six or seven hours after breakfast, and then serve supper at five-thirty or six, only four and one-half or five hours after the heartiest meal of the day. The quality of mercy ought not to be strained.

Nor will we allow our students, many of whom come from the farm, the shop, and other active occupations, to settle down into sedentary work without regular, vigorous exercise of some kind every day—useful labor and physical training being best of all. If we do allow it, we need not be surprised if the

more active boys wrestle in the house, smash furniture, climb fire escapes, and do other feats that will give play to their physical energy; or if others grow sallow, get bad stomachs, develop tuberculosis, and fall out of the race; and we shall continue to have requests pressed upon the faculty for living outside of the home for the stomach's sake.

When we accept boys and girls into our school homes, and assume the place of parent to them, we are taking on no light responsibility. If the health is to be as sacredly guarded as the character, as we are told, it is worth while for us to give most careful, conscientious attention to safeguarding and promoting the health of every student who comes under our care, but especially of those who are received into our school homes.

An Important Question

EVERY year sickness enters many of our schools and our homes, and too often precious lives are lost. It is therefore important that serious study be given to the relations the school and the home bear to each other with respect to the prevention of disease.

We are especially fortunate in obtaining a valuable contribution from Dr. Willard S. Small, who has devoted a large part of his time to the study of school hygiene and related subjects. Dr. Small is also the author of a number of government bulletins treating on these subjects. These bulletins are published by the United States Bureau of Education.

In the following number of the EDUCATOR Dr. Lauretta E. Kress, who is well known to most of our readers, will give valuable information to our teachers concerning the diagnosis of diseases common to children. In a later article, the responsibility of parents with respect to hygienic measures in the home and school will be discussed.

The emphasis which the church lays upon the study of health warrants a serious study of health conditions in our schools, by teachers and parents.

An Example to Our Schools in America

THE India Union Mission is conducting a training school at Coimbatore, south India, for our young men and women speaking the Tamil, Telugu, and Malayalam languages. Connected with this school, as a part of its work, is a strong Missionary Volunteer Society. The regular meeting of the society is held on Sunday afternoon. The one which I attended was conducted very much after the order of our Missionary Volunteer meetings in America. After the usual opening exercises the members reported the work done since the last meeting. I noted that every item on the report blank save one, "Articles of clothing given away," was filled in by somebody. It was very natural that there should be nothing to report in this work, for clothing is not a very important item of life and living in south India.

I asked the secretary of the society to write me a statement concerning their work. In the course of this report he said:—

"Realizing from the beginning that we have to be trained for the most glorious work, we have always tried to get the experience in a practical way, too, by going out and meeting the heathen and announcing to them the coming kingdom of our Lord. Usually once in a month we go to different villages round about this place, and after preaching the blessed gospel to them, we sell Gospel portions. Some time ago we felt that we ought to present the gospel oftener than we had hitherto done, and therefore we formed a missionary band, with Mr. Samuel, our evangelist, as its president, to visit the town every week for this purpose, and as often as possible to scatter our message-filled pages; and we are glad today that we are having varied and interesting experiences.

"The girls are not behind in this kind of work. At first they thought that they would not be able to go out and preach and sell the literature as the boys did, and so they sat in their homes and made handkerchiefs, ties, etc., and sold these

to the boys, and with the money realized, they purchased tracts and papers and gave them to the boys to be distributed freely in the town. God blessed them in a way least expected by them. Then they got bolder, and instead of giving the literature to the boys to be distributed as they were doing before, they took the tracts themselves and went and distributed them, and stood before crowds of people, sang songs, and told them about the love of our Saviour. They have gone out like this about ten times, and have proved that the young Indian woman, too, can do something for the love of her Saviour.

"As three languages, Tamil, Telugu, and Malayalam, are represented in our school, when we go out we preach in these three languages, as we find occasion for doing so."

After the meeting the young people went outside the meeting-room and held an auction of a cucumber and a penholder. They sold them for two or three annas each (four or six cents), and the money went into their missionary fund. These young people have little money and few means of earning it, and yet in different ways they get money for their society.

They had a missionary fund of upwards of 50 rupees (sixteen or seventeen dollars). With this fund they assist their members in doing missionary work; for instance, pay the car fare of those who wish to canvass in adjoining towns. Every week members go out to sell our literature, canvass, hold meetings, give Bible readings, etc. Students in the school are being continually converted from heathenism because of the earnest work, prayers, and influence of those who are Christians.

At the conference just held in Calcutta, it was voted to endeavor to establish a Missionary Volunteer Society in each school in the Union Mission. The organization of such a society as is conducted at Coimbatore will do much to build up any school in the work for which it is established. And this is true not only of schools in India, but in all lands. The Missionary Volunteer work

is the right arm of our educational work, and should find a large place in our schools. Few, if any, of our schools in America can make a showing of missionary endeavor exceeding that of the school at Coimbatore. They provoke us to good work. Let us be provoked.

FREDERICK GRIGGS.

Work the Best Tonic

ANENT the tonic value of work, we have the report from London that a new system of treatment for wounded soldiers—that of combining it with training and exercise—is being used with most encouraging results at military hospitals. The basic idea is that the convalescent will be more cheery and will recover sooner if at work. Accordingly, if a tailor has lost a foot, he can obviously work at his trade while the wound is healing. If a bricklayer has lost a foot, he is apprenticed to one of his mates to learn the tailor's or the shoemaker's or the turner's trade. Some three hundred out of eight hundred in one hospital have enrolled as workers, and it is found that the physical exercise and the diversion of mind are speeding their recovery.

There is no better tonic than work for other ills than physical wounds. The restless energy of youth, weak digestion, mental laziness, moral perverseness, headache, nervousness, and similar ailments find their remedy often in the proper kind and amount of work and physical training. Everybody—teacher and student—needs such a tonic. Every school should provide it, regardless of whether the student needs help on his expenses or whether his work is always financially profitable or not. It pays for the moral and mental tonic it affords.

"HEALTH is a great treasure. It is the richest possession that mortals can have. Wealth, honor, or learning is dearly purchased if it be at the loss of the vigor of health. None of these attainments can secure happiness, if health is wanting."

THE NORMAL

Our Old Teacher

I WONDER if he remembers,
That old man blest of heaven,
The class in the old red schoolhouse
Known as the noisy seven?

I wonder if he remembers
How restless we used to be?
Or thinks we forget the lesson
Of Christ in Gethsemane?

I wish I could tell that story
As he used to tell it then.
I'm sure that, with heaven's blessing,
I could reach the hearts of men.

That voice, so touchingly tender,
Comes down to me through the years,
A pathos, which seemed to mingle
His own with the Saviour's tears.

I often wish I could tell him,
Though we caused him so much pain
By our thoughtless, boyish frolic,
His lessons were not in vain.

I'd like, yes, I'd like to tell him
What his lessons did for me,
And how I'm trying to follow
That Christ of Gethsemane.

How many besides, I know not,
Will gather at last in heaven,
The fruit of that faithful sowing,
But the sheaves are surely seven.

—Selected.

TEACHING NOTES—GRADE BY GRADE

FIRST GRADE—Anna A. Pierce

Numbers

The aim of arithmetic is to cultivate in the child the habits of observation, thought, and

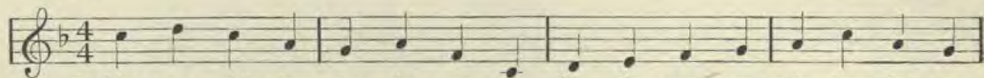
expression. These powers are not developed alone in the number class.

During the first semester of the school year, numbers as a separate study should not be

APRIL

A. A. P.

ANNA A. PIERCE



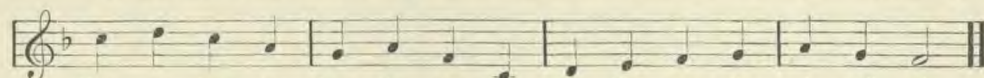
1. List - en, chil - dren, to the pat - ter Of the mer - ry rain - drops clat - ter;
2. And the sun - beams soft - ly creep - ing, From be - hind a cloud are peep - ing;



Hear the mu - sic of the rain - drops Tap - ping on the win - dow pane.
And the sun - shine and the show - er Paint a rain - bow o'er the hills.



O - ver ev - 'ry house - top dash - ing, In - to ev - 'ry brook - let splash - ing,
For the show'r and shine to - geth - er Make the pleas - ant A - pril weath - er,









How we love to hear the mu - sic Of the gen - tle A - pril rain.
And the min - gled rain and sun - shine Make the gold - en daf - fo - dils,

given. However, the teacher should have this aim constantly in mind, and take every opportunity to develop these three powers in the child preparatory to the number class which is soon to follow.

During the first semester the child is getting a good foundation in reading, and while the number class is not listed on the program, the number idea is not left out of the child's work.

Most children upon entering school have some idea of numbers.

During the first half year of a child's school life, number work is correlated with nature

		$3 + 2 =$								
		$2 + 3 =$								
		$4 + 1 =$								
<i>or</i>										
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<u>3</u>	<u>2</u>	<u>4</u>								
2	3	1	<i>etc</i>							

study, reading, drawing, games, and to some extent with every subject. To illustrate, in nature, counting of leaves and petals, learning to read the thermometer and tell time. In reading, the children learn to tell the number of the page, and when referring to certain words in a sentence, to do so by number.

In construction work accurate measurements must be used. The passing out and taking up of material afford excellent opportunity for getting the number idea.

Teaching the children to count by groups helps them to see clearly the facts of addition, and prepares the way for the mastery of the combinations. In this connection may be used groups represented on cardboard, using colored paper disks:—

o oo oo oo ooo oooo oo oo oo oo oo oo
o; o; o; oo; o; ooo; ooo; oo oo; oo o o o
oo; oo;

In teaching the pint, quart, and gallon, the teacher should illustrate by the actual use of these measures.

The more effective way to teach the inch and foot is to have each child make a cardboard ruler and measure with it. Let him measure his book, pencil, and other objects.

Playing store and using toy money gives an excellent drill in the combinations and separation of small numbers, and also teaches the value of the different coins.

Halves, thirds, and fourths should always be taught from objects. The teacher may

introduce the lesson by cutting an apple before the class. Then let the children make these divisions. Provide each with scissors and a string or strip of paper twelve inches long. Let them divide into halves, thirds, or fourths, telling the number of inches in each division.

Excellent results in teaching simple number facts can be secured by the use of a simple chart picturing the combinations. Take, for example, the number facts connected with 5,—

$3 + 2 =$	or	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 5px;">3</td> <td style="text-align: center; padding: 0 5px;">2</td> <td style="text-align: center; padding: 0 5px;">4</td> </tr> <tr> <td style="text-align: center; padding: 0 5px;">2</td> <td style="text-align: center; padding: 0 5px;">3</td> <td style="text-align: center; padding: 0 5px;">1, etc.,</td> </tr> <tr> <td style="text-align: center; padding: 0 5px;">4</td> <td style="text-align: center; padding: 0 5px;">1</td> <td style="text-align: center; padding: 0 5px;">—</td> </tr> </table>	3	2	4	2	3	1, etc.,	4	1	—
3	2	4									
2	3	1, etc.,									
4	1	—									

until all the number facts of 5 are pictured, as illustrated in the first column on this page.

Stories may be told concerning each picture, first by the teacher, then by the pupils.

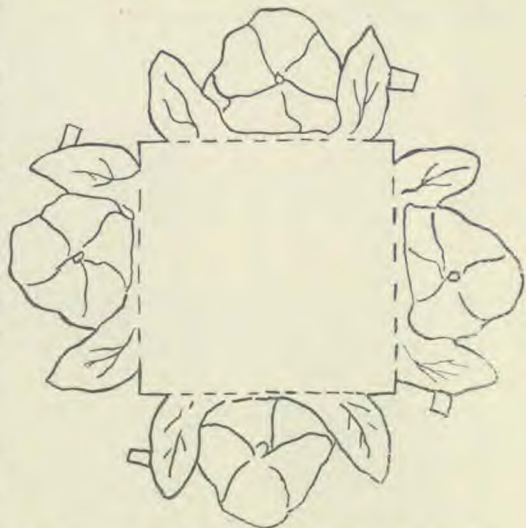
These charts can be easily made on sheets of wrapping paper. Use different illustrations on each chart. As these are reviewed, often the pictures of the combinations will impress themselves upon the minds of the children.

Children will also enjoy making little picture charts of their own to illustrate number facts.

SECOND GRADE — Edith A. Cummings

Numbers

The primary teacher who is ambitious to secure the best results in the teaching of numbers has learned the necessity of constant drill and frequent reviews. The better her



This pattern may be finished as a pansy, wild rose, or other small flower, and colored accordingly.

devices for drill the more certain she will be to hold the pupils' interest. During these last two months, when the children are growing

restless and review is so essential, we need to resort to all kinds of ways and means to hold their interest.

Under the guise of a new game the child is unconsciously fixing certain facts. "I Spy" is an interesting game. Each child is



provided with a card or piece of paper containing the answers to problems the teacher will ask. For instance, the teacher will say, "John, what is 7×2 ?" He looks for the card containing the number "14," and says, "I spy," points to the card, and says, " 7×2 are 14."

Problems in addition, subtraction, and division may also be played in the same way. A number race is interesting and teaches speed and accuracy, and may be adapted in a great variety of ways. Place on the board, for instance:—

7	9	11	5	8	or	7	8	9	4	6
15	15	15	15	15		2	2	2	2	2

Two pupils are selected to go to the board and work the same problems. If any mistakes are made, the pupils first discovering these errors take their turn in the race. When no errors occur, the most orderly and attentive pupils are chosen to race next, each time changing some figures in the problems.

Language

Encourage the children to learn the reading lesson so well that they can tell the story. Teach the use of good language. Permit those who listen to make corrections, always kindly, and those corrected should thank them for the corrections, and try to profit by them.

When a reading lesson can be well told, let the children write the story, or give them a pretty picture to write about, permitting them to use it to illustrate their story, and to adorn the cover of a booklet in which the story may be written.

The study of a picture teaches the child to think, and calls for close observation. The children should be encouraged to write the story as they would tell it.

This story was written by an eight-year-old girl. The picture she chose (one from many) was a little girl carrying a book.

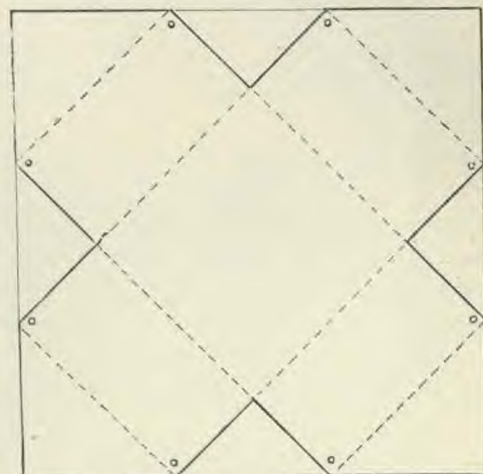
"This little girl goes to Sabbath school. She recites her little verse, and sings a little song, and then listens to her teacher. Her name is Vivian. She wears a pink dress, white shoes and stockings. She is dressed in the best clothes she has. She has her little Bible in her little fat hands. She is going to listen to the preacher. She likes to go to Sabbath school."

It is interesting to watch the kind of pictures the different children choose. Boys usually choose animal pictures, while most girls like to write about little children.

Manumetal

The teacher need not be reminded that it will soon be time to make May baskets, for doubtless some have already made their way into the schoolroom.

Why not include a few patterns and baskets in your manual training course, and let the children measure, cut, and fold some and make a few others from patterns. Here are a few suggestions which, when colored properly, make very attractive baskets. Ribbon for handles may be furnished by the pupils. Bits of colored yarn twisted or crocheted with the fingers, make good ones too.



Fold like a box, and tie together through holes; turn the corners out.

THIRD GRADE—Irene C. Ayars

Bible

As a help in teaching the lessons about foreign missions, the little booklet "An Outline of Mission Fields," published at the Review

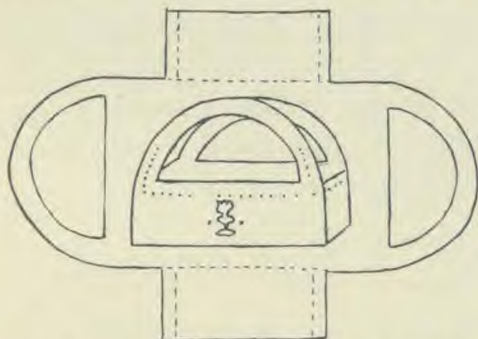
and Herald, is good. You can get this free of charge.

The lessons on Christ's Second Coming and the rest of the lessons for this month contain important material.

In "The Great Controversy" and "Early Writings" the teacher will find much that is helpful in presenting these lessons.

Language

During this month the correct use of many verbs in their various forms is taught. These are important lessons, for over and over again



The larger drawing is the pattern, the finished basket being shown in the center.

we hear "lie" used in place of "lay," and vice versa; also many other verbs, such as "rise," "raise," "sit," "set," are used incorrectly. If the children form good habits of speech while young, they are likely to be careful afterward.

In presenting these lessons a good plan is to write sentences on the board and have the children copy them, filling in the blanks with the right verb and the right form. Another good plan is to have the children write a certain number of sentences illustrating the use of the different verbs. Do you correct your pupils when you hear them make mistakes in grammar? This is a good plan.

Spelling

Spelling Game.—Have the children form a circle. The teacher pronounces a word to each child in the order they stand. If a child misses a word, he goes into the center of the ring. As soon as another word is misspelled, if the child in the center can spell it, he trades places with the one who made the mistake. This game is good to use in reviewing words.

Busy Work

Children enjoy hanging May baskets. For busy work, sometime the latter part of this month let the children make some May baskets in school. The above pattern, taken from the *Junior Instructor*, is simple enough

for any child to make. Use Bristol board of a light color. Have the children draw a simple design on each basket.

FOURTH GRADE—Dorothy E. White Bible

This month the map showing Israel's wanderings in the wilderness may be completed. An interesting device for review is to have an outline map of the country traversed, illustrating their wanderings, with stations indicated but not named. Let the children trace the journey, naming each place, telling the experience there, and drawing the lesson from it. Slips of paper with the names of places, of tribes, and of kings of the enemies of Israel may be prepared. These may be given to those who can make a statement about the names given; or the teacher may make a statement and the slip be passed to the one guessing the name.

Let me urge all to prepare their lessons from Mrs. McKibbin's Manual. It emphasizes the spiritual lessons, sounds the keynote for each, and thus gives us our viewpoint. In our endeavor to make the Bible hour interesting, let us not forget that its real purpose is to give the child a true knowledge of God.

Nature

If you have set apart this month for the study of birds, you will find the bird chart on a large piece of paper or on the blackboard a big help. It assists in developing the children's observation—a very necessary thing to do. The pamphlets from the Audubon Society which have been recommended are very fine. Our State educational department publishes a splendid pamphlet, called "The Com-



mon Birds of Michigan." Doubtless you too can secure something similar from your State department.

In connection with the textbook work, if the characteristics of the different families are emphasized, the similarities and dissimilarities noted, it will be of great benefit to the children in classifying birds. For example, "the

scratchers" and "the waders" differ in (1) shape of body, (2) feet, (3) bill.

Help the children to know the birds in the neighborhood by sight and by song. Help them to know them *in the field*, not merely in the *book*.

For the next month's study of plants, some seeds should be planted at short intervals, so that later the different stages of growth may be observed.

Arithmetic

This subject, to be effective, must be taught objectively this month. Such problems as $\frac{1}{6}$ of 18, $\frac{1}{4}$ of 24, should be explained with sticks, cubes, circles, etc., and until the *reason* for the answer is clear, should be constantly used.

Teach surface measure by using (1) rows, and (2) number of squares in a row. If I had an oblong 6 inches long and 4 inches wide, I should have 6 rows, with 4 squares in a row, or 24 squares. Then when cubic measure is introduced, the word "layer" may be introduced too. If the prism is 6 inches long, 4 inches wide, and 7 inches high, it would have 6 rows, with 4 in a row, for the basic layer. Now if I take 24 cubic inches and use them for my first layer, it is easy to demonstrate that I should need 7 such layers, each with 24 blocks, to complete my prism. If there are 24 blocks in one layer, in 7 layers there would be 168 blocks; etc.

Often, even after careful explanation, confusion arises in the mind of the child concerning the meaning of "surface" and "perimeter." Use the objects again; frequently recall the two processes, and be patient. The figures representing the foundations of the houses are irregular, but these may be made simple by dividing them into squares and oblongs, and then adding the areas of each smaller figure to get the total area. The point is to get the children to be able to see in the figures given, the place to draw the lines which divide them into smaller figures.

FIFTH GRADE — Grace R. Rine

Reading

Children may form the habit of pronouncing words correctly at home, at school, and at play, by means of the reading class. Encourage them to *want* to speak correctly. In training along this line do not attempt too much at once. It will confuse the child.

In one lesson give special attention to words containing the short sound of δ . Have all words in the lesson that contain this sound selected by the child, and pronounced by all in class. Then as the children read, let all notice whether or not such words as "strong," "soft," and "long" are pronounced correctly.

At another time have children look for

words containing letters or syllables that are often slighted or entirely suppressed. *History* is called *histry*, *interesting* is called *intresting*, and *surprise* is called *suprise* by the careless reader. Let these pitfalls first be pointed out, then children will be on their guard as they read.

Sometimes you will find a lesson where combinations of consonants call for special drill. Such words as "hosts," "insects," and "consists" need special drill before children attempt to read the lessons containing them.

In the same way, deal with long \bar{u} , until children say *tune*, not *toon*; drill on "ask" and "last" until, without hesitation, the children read and speak them correctly. This may be done at your reading period by means of blackboard drill and constant vigilance.

The fifth grade should always have word and phrase drills preceding the reading of their lessons. Pronunciation drills and accent drills all have their part to play in a well-taught reading lesson.

Spelling

As you near the close of the school year, do not neglect frequent reviews and drills on words misspelled throughout the year, and the common everyday words not always contained in the spelling book. When all words kept in the memorandum book have been thoroughly drilled upon, give at intervals a drill of this nature. Have children spell, without previous preparation or study, the name of any article you may mention in the school-room, as, eraser, picture, calendar, wainscot, ceiling; let them at another time spell the name of any practical article used about the house, that would be suitable to this grade; or the names of articles used about the yard or garden may be made use of, as, shovel, trowel, hammock. Again, the utensils used in cooking would make a practical spelling lesson, as well as the names of the subjects studied in school.

Lead every child to take a just pride in spelling, and let the words he spells include practical, usable words from everyday life.

Spelling Folder.—Since the children are studying about buds in their nature lessons, some pretty drawings of the various kinds of buds may be made for the cover of the April spelling booklet or folder.

Encourage carefulness each month in keeping the folder. It should contain not only the spelling words, but dictation exercises and original sentences.

Language

One strong feature of language work should be memory work. The two beautiful poems on pages 246 and 260, should receive special attention.

1. Do not assign a poem to be memorized until it has been carefully read with the children in class, and its meaning explained.

2. It would be better to learn only a part of a poem and have it well memorized than to stumble over all of it.

3. Do not drill on memorizing until children tire of it. Mingle it with your other language work. If a poem seems hard to remember, drop it for a while, and come back to it again at another time.

4. It is a good plan even in this grade to spend a part of your class time in teaching the poem to the children. Thus you may help them to use their time to the best advantage, and keep them from forming bad habits of expression.

5. After a poem has been learned, it should be dictated or copied from memory in the pupil's language notebook. In doing this, make sure that not a mark of punctuation is lacking.

6. It adds to the interest of copying the poem, and children will do better work, if they are allowed to illustrate their work with paper cuttings or drawings. For example, the poem on page 246 may be illustrated by using paper cuttings of the destroying angel, a lamb, sandals, a staff, a door with the stain of blood, and a torch.

7. Work of this kind must be supervised if good results are obtained. It would be better to take a part of the class time and give it this supervision than merely to ask the children to do it without any assistance.

8. The teacher should memorize the poem that she attempts to teach. Children will not be very enthusiastic about reciting to the teacher while she is looking at her book. But how easy it will be to secure their interest if they know their teacher knows every word herself, and how much they will enjoy trying to put into it their best expression if their teacher can render it in a beautiful and expressive manner.

Nature

1. Now is the time to plant a school garden. It adds so much to the interest, and makes so much more real this study on plants and seeds. But if it is impossible to have a garden, by all means plant seeds in boxes and watch them grow.

2. Teach the correct names for the parts of the plants. It is just as easy for children to remember caulicle and cotyledon as to remember the States and capitals.

3. Encourage observation by having children look for plants, buds, and leaves like the ones described in their book, and bring specimens to class.

4. When studying trees, tell the children the story of "A Boy Who Hated Trees," found in the little book "When First We Went to

School." This increases their interest in trees, and their desire to care for them. Arbor Day also should receive attention.

5. "The Story of the Buds" and "The Story of the Stems" are two of the five-cent classics that add interest to your way of describing plants.

6. See December number, under fifth-grade Nature, for additional suggestions.

SIXTH GRADE — Ruth Hale

Bible

Before taking up the work outlined for April, give a thorough review of the events of Jesus' journey to Jerusalem. The diagram, if made as previously suggested, offers an interesting means of review.

The lessons on the "Widow's Mites," the "Ten Virgins," and "The Talents," are old familiar stories, but should be studied now in such a way as to cause each child to apply the lesson to himself.

After studying lessons 112, 113, and 114, have a review in the form of a Bible reading given by the pupils. The verses memorized during these lessons form the basis of one of our main doctrinal points, "The Soon Coming of Christ." Since we as a people believe this all-important event to be so near, and since the work to be done is so great, how necessary it is that we impress the fact upon the plastic minds of our youth, who, as we are told, are to play a leading part in the closing work of this message.

Nature

The lessons this month, beginning with the "Fall of Man," and finishing with the "New Earth," connect the previous studies of the different sciences with the Bible. Stress the fact that all true science is based on the Bible.

It is well to use these as reading lessons, following each with interesting discussions. They may also be used as a basis for composition work.

A most interesting fact that may be brought out by these lessons is that the many wonderful and beautiful things in this world will be perfected throughout eternity.

As the work in nature for April is not so heavy as usual, some time may be given to the preparation of a school garden to be used in connection with the study of plants in May.

Reading

Give special attention to the lessons, "Christ's Reception in Heaven," and "Fanny Crosby, a Blind Hymn Writer." The mental picture as given by Sister White in her description of our reception in heaven is one of the most wonderfully fascinating of all pictures. As the children read, have them

frequently close their eyes and try, as far as possible, to get the details of the picture. After reading the selection on Fanny Crosby, encourage the pupils to read her autobiography.

Study carefully Holmes's masterpiece, "The Chambered Nautilus." Compare with 1 Cor. 15: 51-55. This poem should be copied in the notebook with a sketch of the Life of Holmes. Illustrate with a drawing of the chambered nautilus.

Continue drill work on the different kinds of phrases, clauses, verbs, and sentences. An interesting review of these subjects may be conducted on this plan: Write questions on slips and pass out to class. Let the pupils stand and answer. If any fail to give the right answer, let other members of the class correct them.

I have found that the children especially enjoy picking out these different parts of the sentence from sentences written on the board, and underlining them with chalk of different colors; for instance, the adjective clauses may be underlined with red, adverbial clauses with blue, etc. A simple manner of parsing may be introduced here.

Do not neglect the dictionary work as outlined in the book. Have pupils make sentences with these words. In this way their vocabularies are greatly increased.

SEVENTH GRADE—Harriet Maxson

Reading

A successful reader is not only one who can read any selection aloud intelligently, but one who can also read rapidly to himself and yet gain the thought accurately. A reader whose reading is of true value to him, is one who is able to scan a page and grasp every important thought. Of course such an accomplishment requires years of practice, yet, even in the seventh grade, a start may be given, which as the pupil's need increases may become a profitable practice.

At first, use the simplest of exercises. Notice how many of the class pronounce the words in a whisper to themselves as they study. Then, ask how many of the students vocalize mentally. Explain the object of the drill as that of learning to grasp every idea in the selection without taking the time or energy to pronounce the words even mentally. Choose a few simple sentences from the Reader. Have all in the class begin reading at the same time. As soon as each student finishes

the selection, he should quietly close his book. When all have finished, call on one to give the thought. See if another can add any point which the first has omitted.

To the surprise of many a teacher, it may often be found that the most rapid reader has gained the most complete thought. Encourage rapidity on the simplest drills, then gradually lengthen them. Have the pupils as they finish pass to the board and place upon it an outline of what they have read. Compare outlines.

As the ease with which the students read increases, assign different articles to different members of the class, to be scanned and reported upon. Items of current events or editorials in such magazines as the *Outlook*, the *Literary Digest*, or any of our own papers, are very useful for such drill.

Bible

The following drills may prove helpful in the review of last forty lessons of Book IV:

1. Place upon the board a large number of texts which have been emphasized in a number of lessons. Have the class place those belonging to one subject in one group, those of another subject in another, naming each group.

2. The teacher may tell the contents of a certain verse, and the student who is able to find the verse in the Bible first may be allowed to tell the contents of another, etc. Have the pupils keep a list of those verses they were unable to find, and give special study to them.

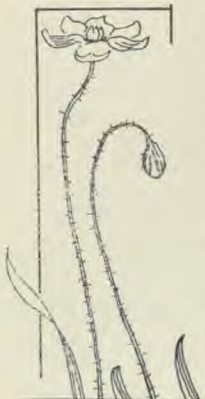
3. Place on the board an outline of a certain Bible reading, and have the students fill in the texts; or, reversing this drill, place the texts of a Bible reading on the board, and have the students rearrange them in the order they consider most forceful, and then allow them to take their Bibles and give the reading.

Geography

The plan of having pupils take trips between various countries as exporters and importers is very successful in reviewing. The following device has proved helpful as well as interesting to pupils. The teacher should make out a number of trips similar to the one below, by which the important features of all the principal countries of the world may be emphasized. Wherever the meaning is clear, the name should be omitted for the student to fill in. At the discretion of the teacher, such an exercise can be made much more complete and rich in descriptive material. These exercises should be typewritten and handed to the students to fill out.

Model Exercise

My home is in (*Sheffield*), England, that city noted for its (*manufacture*) of (*cutlery*).



In fact, this section is famous for its (*manufacture*) of (*iron*) goods.

At present I am engaged in exporting (*cutlery*) to Shanghai, (*China*). I first ship my goods to (*Liverpool*), England's greatest seaport. Since my shortest route lies through the (*Mediterranean*) Sea, instead of around (*Cape Horn*) or Cape (*of Good Hope*), we usually go that way.

Leaving (*Liverpool*), we pass out of the mouth of the (*Mersey*) River, through the (*Irish*) Sea and (*St. George's Channel*), and into the (*Atlantic*) Ocean. We then turn due south and leave on our left the Bay (*of Biscay*), then the coast of (*Spain*) and (*Portugal*). Passing through the Strait (*of Gibraltar*), the (*Mediterranean*) Sea is traversed, and, after a short stop at (*Alexandria*), the seaport of Egypt, we anchor at (*Port Said*), on the (*Suez*) Canal. From the canal we pass through the (*Red*) Sea, Strait (*of Babel-Mandeb*), Gulf (*of Aden*), and out into the (*Arabian*) Sea. We then sail around the (*Indian*) peninsula, into the bay (*of Bengal*), and stop at (*Calcutta*) for a short time. Traveling on, we pass through the Strait (*of Malacca*), between the island of (*Sumatra*) and the (*Malay*) Peninsula, cross the southern portion of the (*South China*) Sea, and visit (*Manila*), on the island of (*Luzon*), a city under the supervision of the American government. Turning northward, we pass the island of (*Formosa*), skirt the edges of the (*East China*) Sea, and land in Shanghai, our destination.

This city has a population of about (*seven hundred thousand*). The living quarters of the Chinese are (*crowded*) and (*insanitary*), the streets (*narrow*) and (*crooked*). A portion of the city, however, is distinctly foreign, and reminds me of home.

We have a large (*school*) here, (*one hundred and twenty*) natives attending. Our (*printing plant*) has more business each year, and (*thousands*) of papers are scattered. Great numbers are accepting the truth, and a great work is opening up.

On my return voyage I carry a cargo of (*tea*) and (*rice*).

NOTE.—Such a drill may be made to embrace every feature which the teacher wishes refreshed in the minds of her students. For instance, instead of a drill on land and water forms, it may be a trip through the mission fields describing our work, the people, etc.; it may be a tour of interesting cities, or a journey through gorgeous land scenery, or perhaps the important features of all may be combined in one.

Spelling

Toward the end of the year make a special effort to have each student master the spell-

ing of those words which he uses. All through the year a list of *all* misspelled words, whether misspelled at the board or in composition, should have been kept in a small notebook for the purpose. As the required spelling is finished, spend the greater part of the time on such a list. Have five students place five of their words on the board, which will make a list of twenty-five words for the new lesson.

Give frequent oral drills. The old-fashioned spelling match occasionally adds interest. This may be varied by having the class stand



in the back of the room. As each student spells a word correctly, allow him to take a step forward. Those who by spelling correctly reach the opposite side of the room may be given a perfect grade for the day.

The honor system used in some conferences has proved a healthy stimulus even in this grade. Have the names of the pupils printed on a sheet of cardboard and hung in some conspicuous corner of the room. Place a star after the name of the student for every twenty-five perfect lessons.

Formal language work may be profitably correlated with spelling by giving as a lesson a list of words which are to be looked up in the dictionary. The teacher should then give out a synonym, requiring the student to write the word in the lesson to which it corresponds. Such a drill should be considerably shorter than the ordinary spelling lesson.

Drawing — Nellie Buchanan

The "infinite curve." There is an element of beauty that the lover of art and nature learns to appreciate; that is the curve which

some artists call "the curve beautiful," and others "the infinite curve." It is more interesting than the curve of a circle, for a circle curve is limited by a center, and every part of the curve is the same as every other part. The infinite curve is not the same in any two parts, yet the curve must be smooth. It may start with a long sweep that is almost a straight line, and then gradually gain more and more curve until the line resolves into something similar to a curve.

Have the students notice this curve in the smoke as it curls lazily upward. If the ocean is near, they may see splendid curves in the rolling waves. They will see them in the limbs of the great oak or in the dainty nodding flowers. They may note them while watching the soaring birds. Then, just to relieve the stiffness, teach them to put that same curve into their own pictures. The teacher will often be surprised at the transformation.

EIGHTH GRADE — W. C. John

Arithmetic

Before taking up the final review work, a study of the metric system will be found valuable. Sometimes it is best to study this subject at the same time mensuration is being discussed. It should not, however, be omitted from the course.

In order that the pupil may appreciate the value of the metric system, it would be well to show the lack of uniformity in the older systems of measurement. In the old system we find the following ratios in the table of long measure: 12, 3, $5\frac{1}{2}$, 320; in the metric system it is 10, 10, 10, etc., for all measures. Compare the ratio of the avoirdupois table and the corresponding table of the metric system. Other similar comparisons may be made.

The metric system is especially adapted for making extremely small measurements, as the smallest unit for ordinary purposes — the millimeter — is considerably smaller than the smallest division on a foot ruler.

Obtain for the class a metric ruler, and allow pupils to take measurements as follows:—

Let one pupil measure the thickness of some small object in terms of $1/16$ inch, and another in terms of millimeters. Which figure is the easier for use in calculation?

Ask a pupil to solve the following: Find the volume of a rectangular tank 4 ft. $8\frac{1}{2}$ in. long, 3 ft. $11\frac{3}{4}$ in. wide, and 2 ft. $5\frac{1}{4}$ in. deep.*

Let another pupil find the volume of a tank of equal dimensions but stated in the following terms: 1.32 by 1.07 by .65 meters.

Which pupil will finish first?

* Taken from "The Teaching of Mathematics," by Young.

The problem may be increased so as to include the reduction of the volume to quarts and to liters.

If a laboratory is near, it would add to the interest in this subject to take the class where they can see the delicate scales used in weighing chemical substances.

It is not necessary to teach in the eighth grade the more complex uses of the metric system, as the time would be wasted. With the preparation already gained the pupils will be ready to continue its study when it becomes a practical necessity in physics and chemistry.

Bible

The study of the closing lessons can be made interesting, as much of the material is contemporaneous.

Correlate lessons 55-59 with the work in history.

The pupils should be taught to be careful in discussing the serious prophecies which are now explained, in order not to cause unnecessary offense.

Emphasize the work of the "closing gospel message," in which all pupils may take part.

The missionary garden may be correlated at this time with agriculture.

History

As soon as the textbook is completed, spend a few days in the study of the relation of our country to the great war.

The lessons prepared on the *Literary Digest* and the *Watchman* will be of special interest at this time. Have the pupils bring in newspaper clippings, as well as those from our own papers, which treat on the war.

A careful study of the present situation in this country and in the entire world will help to convince every pupil that the world needs the leadership of Jesus Christ more than anything else.

Agriculture

Encourage home gardens whenever possible. Do not accept slovenly work in making garden beds, in planting, or in cultivation. Show the pupils that agriculture and gardening can be made beautiful, if we take pains. Show the class pictures of beautiful flower and vegetable gardens.

Plan for an exhibition of the best products at the end of the school year.

Reviews

The importance of the final review in each subject can scarcely be overemphasized. The reviews may be made by written outlines, by topics with written and oral discussion, and by general questioning.

Give special attention to those topics which must be carried over to the following year's work.

Table of Standard Figures Used in Grading Nine Important Sanitary Items in Schoolhouses

Accompanying article by Dr. Willard S. Small. See paragraph numbered 1, page 230.

Item	Method of Calculation	Grades				
		Excellent	Good	Fair	Poor	Bad
Ventilation	Cubic feet air space per child Proportion of proper supply	200 or more Standard	199.9-175 Standard- $\frac{7}{8}$	174.9-150 $\frac{7}{8}$ - $\frac{3}{4}$	149.9-133.3 $\frac{3}{4}$ - $\frac{2}{3}$	133.2 or less $\frac{2}{3}$ or less
Illumination	Relation of window area to floor area Proportion of proper supply	.20 or more Standard	.1999-.1667 Standard-5-6	.1666-.1250 5-6- $\frac{5}{8}$.1249-.1111 $\frac{5}{8}$ -5-9	.1110 or less 5-9 or less
Desk provision	Square feet floor space per desk Proportion of proper supply	15 or more Standard	14.99-13.13 Standard- $\frac{7}{8}$	13.12-11.25 $\frac{7}{8}$ - $\frac{3}{4}$	11.24-10.0 $\frac{3}{4}$ - $\frac{2}{3}$	9.99 or less $\frac{2}{3}$ or less
Boys' toilets (seats)	Boys per seat Proportion of proper supply	40 or less Standard	40.01-60 Standard- $\frac{2}{3}$	60.01-120 $\frac{2}{3}$ - $\frac{1}{3}$	120.01-160 $\frac{1}{3}$ - $\frac{1}{4}$	160.01 or more $\frac{1}{4}$ or less
Boys' toilets (common wall urinal)	Boys per inch wall space Proportion of proper supply	1.25 or less Standard	1.251-1.875 Standard- $\frac{2}{3}$	1.876-3.75 $\frac{2}{3}$ - $\frac{1}{3}$	3.751-5.0 $\frac{1}{3}$ - $\frac{1}{4}$	5.001 or more $\frac{1}{4}$ or less
Boys' toilets (individual urinals)	Boys per individual urinal Proportion of proper supply	24 or less Standard	24.01-36 Standard- $\frac{2}{3}$	36.01-48 $\frac{2}{3}$ - $\frac{1}{3}$	48.01-60 $\frac{1}{3}$ -2-5	60.01 or more 2-5 or less
Girls' toilets	Girls per seat Proportion of proper supply	24 or less Standard	24.01-36 Standard- $\frac{2}{3}$	36.01-48 $\frac{2}{3}$ - $\frac{1}{3}$	48.01-60 $\frac{1}{3}$ -2-5	60.01 or more 2-5 or less
Yard area	Square feet per pupil Proportion of proper supply	36 or more Standard	35.99-24 Standard- $\frac{2}{3}$	23.99-12 $\frac{2}{3}$ - $\frac{1}{3}$	11.99-9 $\frac{1}{3}$ - $\frac{1}{4}$	8.99 or less $\frac{1}{4}$ or less
Drinking water facilities	Pupils per faucet Proportion of proper supply	50 or less Standard	50.01-75 Standard- $\frac{2}{3}$	75.01-150 $\frac{2}{3}$ - $\frac{1}{3}$	150.01-200 $\frac{1}{3}$ - $\frac{1}{4}$	200.01 or more $\frac{1}{4}$ or less

All notebooks should be brought up to date and be ready for inspection.

Closing Exercises

The principal of an eight-grade school should endeavor to plan the closing exercises so that there will not be any crowding just at the last moment. Enlist your best talent, but at the same time give opportunity to those who are not so able, when it comes to reciting and singing. Give the church and the public a hearty welcome.

Personal Hygiene

Do your pupils wash their faces and comb their hair each morning before they come to school? Take a minute some morning just after you have called the roll, and inspect them. Have them hold up their hands where you can inspect them quickly. Look at the finger nails; are they clean? Look at the wrists and see if they are clean. Doing this just one time will not be sufficient. You will need to repeat it many times to get your pupils trained in the habit of cleanliness. To look them over only a time or two, and tell them that this boy has a dirty face, and that one forgot to comb his hair, is only a start. You must work with them, and work hard, until every pupil becomes proud to come for inspection, knowing that he is well prepared for it.

Have a boy who is in good shape stand before the class as an example. Start an honor roll or something to give publicity to the work. If you work enthusiastically for a few weeks, you will be surprised to see the improvement which your school has made.—*Philippine Education*.

An Appeal From the Southern Junior College

OUR Collegedale Students' League, a band of fifty students, have pledged themselves to raise \$2,000 for the roof on the new dormitory to be built this summer. We therefore appeal to all our friends to send a contribution, which will be greatly appreciated.

Pedagogical Hints

I. C. COLCORD

It is not well to have a code of rules of thirty-three or more tacked up on the wall.

Education is not simply the teaching of facts, it is the implanting of discipline. Law-abiding citizens can be made only from law-abiding children.

In Christian schools the effectiveness of the authority exercised is directly proportionate to the degree of proper home discipline.

Why should a child learn to obey?—That he may not become a criminal or confirmed in wrong habits; that he may have self-control and self-respect, and not feel the heavy hand of the law through disobedience.

Four temperaments should be studied,—lymphatic, sanguine, nervous, and bilious. The Spirit of prophecy says that the most unfortunate, those who have the most disagreeable temperament, need our love, our tenderness, our compassion. Those with rough, stubborn, sullen dispositions are the ones who need help the most.

From the same source we learn that students should not be expelled from school "unless human depravity and gross licentiousness make it necessary, that others shall not be corrupted."

"Art of punishment is a rare accomplishment." It should be (1) hygienic—full of encouragement and wholesome; (2) reformatory—an educational means; (3) administered in love and with certainty. No punishment is effective unless *character* is behind it. Says one, "What you *are* speaks so loud, I can't hear what you *say*."

Means of punishment are (1) reproof, private and public; (2) isolation, withdrawal of privilege, report to parents; privation of seat, of recess (seldom), of recitation, of class position; imposition of task; suspension; or corporal punishment, for fighting, insubordination, open rebellion; (3) expulsion—repentance, confession, remittal.

Avoid punishments on the head, as slapping, boxing, pulling nose, ears, or hair; scolding, threats, tortures of any kind, committing of scriptures to memory as an imposed task, red pepper or soap on the tongue, nagging, and accusation of cowardice.

"The object of discipline is the training of the child for self-government."—*Education*."

Self-government is shown by what you are when the back of the teacher is turned. It is acting *on honor*.

Public sentiment is quite condemnatory of corporal punishment, and demands its discontinuance in schools, since it has been abolished in the army, the navy, and the penitentiary. The world's educators say that it hurts both teacher and pupil, and that it only breeds trouble, even when parents give consent.

HOME EDUCATION

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

April

WEARY at heart with winter yesterday,
I sought the fields for something green
to see,
Some budded turf or mossbank quietly
Uncovered in the sweet, familiar way.
Crossing a pasture slope that sunward lay,
I suddenly surprised beneath a tree
A girlish creature, who at sight of me
Sprang up all wild with daintiest dismay.

"Stay, pretty one!" I cried, "who art thou,
pray?"

Mid tears and freaks of pettish misery,
And sighing, "I am April," answered she;
"I rear the field flowers for my sister May."
Then with an arch laugh sidewise, clear and
strong,
Turned blithely up the valley with a song.
— O. C. Auringer.

Nature Month by Month

MADGE E. MOORE

Drawings by Mrs. C. Archer Shull

"A gust of bird song, a patter of dew,
A cloud, and a rainbow's warning,
Suddenly sunshine and perfect blue—
An April day in the morning."

Now we look for the fulfilment of March's promises. Changes have been taking place all winter, deep down in the soil. The frost has loosened up the soil; the rain and wind too have done their part toward getting ready for spring planting. The tiny plants and seeds just under the soil are awaiting April's smile and soft tears.

There is frequently a new arrival among our feathered friends. The soil stirrers—among them the mole and the earthworm—are busily at work. Why does the mole make tunnels through the soil? He is merely after his food, searching for earthworms. He eats bugs also. The mole has a soft gray coat, and can run backward as well as forward; the nose and the tail are both used for the same purpose, that of feeling the way through the dark tun-

nels. These soil stirrers loosen up the soil, letting fresh air in, and mixing well the leaf mold into the soil, which makes it richer.

As the seasons are constantly changing in every locality, nature never ceases to be variable. We wonder just "when and what" about the flowers and birds, "how much" rain we shall have, and whether there will be a late frost. There are, however, some features that are better season calendars than the ones we hang upon our walls.

Trees will prove interesting now while the sap is so abundant, and the buds, leaves, and blossoms are opening. Nature's house cleaning is on, and we find her glad, bright, and clean.

In streams and rivers the fish are actively laying their eggs. (Secure pictures of common varieties of fish, and let the children associate with each its name.)

The flower for your particular State ought to be known and studied. (Show the pupils in as simple a manner



as possible what a State is, the name of theirs, and tell its flower, also why it was chosen.) The following list shows the choice expressed by the vote of public school scholars of the respective States:—

Alabama, goldenrod; Alaska, forget-me-not; Arkansas, apple blossom; California, poppy; Colorado, columbine; Connecticut, mountain laurel; Delaware, peach blossom; Florida, orange blossom; Idaho, syringa; Illinois, violet; Iowa, goldenrod; Kansas, sunflower; Kentucky, goldenrod; Louisiana, magnolia; Maine, pine cone and tassel; Maryland, black-eyed Susan; Michigan, apple blossom; Minnesota, moccasin; Missouri, goldenrod; Montana, bitterroot; Nebraska, goldenrod; New Mexico, cactus; New York, goldenrod; North Dakota, wild rose; Ohio, scarlet carnation; Oklahoma, mistletoe; Oregon, Oregon grape; Rhode Island, violet; South Dakota, anemone; Texas, bluebonnet; Vermont, red clover; Washington, rhododendron; Wisconsin, violet; and Wyoming, the gentian.

Some States observe April 19 (Patriots' Day), April 12 (Band of Mercy Day), and Arbor Day.

Who Likes the Rain?

"I," said the duck, "I call it fun,

For I have my little red rubbers on;
They make a cunning, three-toed track
In the soft cool mud, quack! quack!"

"I!" cried the dandelion, "I!

My roots are thirsty, my buds are dry,
And she lifted a tousled yellow head
Out of her green grass bed.

"I hope 'twill pour! I hope 'twill pour!"

Purred the tree toad at his gray bark door,
'For, with a broad leaf for a roof,
I am perfectly waterproof.'

"Sang the brook, 'I laugh at every drop,

And wish they never need to stop,
Till a big, big river I grew to be,
And could find my way to the sea.'

"I!" shouted Ted, 'for I can run,

With my high-top boots and raincoat on,
Through every puddle and runlet and pool
I find on the road to school."

— Clara Doty Bates.

This month of sunshine and of rain ought to give us bright rainbows, thus furnishing us with many lessons on color (color harmonies of nature, why the rose is red, the violet blue, etc.; the blending of colors to form others, and the cause of the rainbow,—each little drop of water acts as a glass prism does as the sun shines through it).

First Week — Flowers

The city child can study the cultivated flowers—tulips, the crocus, hyacinth, daffodils, narcissus, lilac, and the wild dandelion. The country, though, is the place to study nature during spring, summer, and fall. Along the brookside we find the wild marigold, with its yellow flower and dark green leaf shaped like a kidney bean. The hepatica, or "spring herald," grows on a funny stem. The blossoms are white, purple, pink, or blue, with a dark green heart-shaped leaf. The pure white blossom of the bloodroot, with its yellow center, is especially interesting, as the roots contain a red juice. The leaves surround the stem. Review the anemone. Other wild flowers as they arrive should be well known,—the dandelion, buttercup, ferns, snowdrops, arbutus, bluets, violets, daisies, trilliums, jack-in-the-pulpit,—also the cultivated ones already mentioned.

The flowers of the maple and willow are among the first signs of spring. Compare the pussy willow with other willows.

BUSY WORK

First Week

Make gardens. In shady places plant pansies, violets, fuchsias, phlox, and bluebells. In rocky soil plant nasturtiums and baby's breath. Flowers that like strong sunshine are the nasturtium, poppy, sunflower, daisy, petunia, sweet pea, and snapdragon.

Weed, water, and care for the vegetable garden. Compare growth.

With or without patterns, cut out flowers.



From seed catalogues cut flowers, vegetables, and fruit. Mount and make charts if desired. Cut from magazines or catalogues garden tools. Draw the same.

Use stencils of tulips and blue flags.

Cut seven umbrellas, using folded model, and color with the seven colors, making each umbrella a different color.

Cut squares, oblongs, triangles, circles, and do the same as to color schemes.

Make soap bubbles.

Draw and color a rainbow.

Sew objects to illustrate the seven colors of the spectrum.

Second Week — Trees

Notice and compare the general shapes of the willow and maple, also the branching. Notice that the buds on the maple are arranged opposite, just as is the branching, while the buds of the willow are alternately arranged, as is the branching. The maple buds are in clusters of three—two flower buds with a leaf bud between. The blossoms open first. The flowers have no petals, and some have stamens and pistils, while others have just one. Of what color are these blossoms? The box elder, ash, and elm trees have buds something like the maple.



The small willow buds are the leaf buds, and the larger ones contain the silvery gray balls or blossoms. Review staminate and pistillate willow blossoms (see EDUCATOR, March, 1916). The blossoms of the poplar tree resemble those of the willow, except in color they are red. Look for the scars left by last year's leaf (just below the new bud).

Find a terminal bud. Is it a leaf, flower, or new growth bud? See an apple twig's rings of scars. The bud as it opened, shed its scales one by



one, leaving these scars. From this bud the twig lengthened. Let the children ascertain the age of the twig by counting between the ring scars of last year and of previous years. Force the buds on the twigs by putting them in water, and then compare.

Review seed germination, using a bean, pea, a squash seed, a grain of corn or wheat. First examine the seed, soak it, examine again, plant, and then watch growth (upward and downward). Later in the summer examine the plant, and tell what part of the following are edible: bean, pea, cucumber, melon, squash, cabbage, asparagus, celery, turnip, radish, carrot, and potato.

BUSY WORK

Second Week

Cut out, draw, form out of clay, or sew a tree.

Draw buds and blossoms of maple and willow trees.

Find twigs and look for scars. Compare.

Third Week — Animal Life

Observe an ant hill or a beehive. (Review the study of ants and bees.) Collect insects. Go to a lake or pond and watch the fishes and frogs. Visit a zoo or a farm and study the new life. Insects can be classified as those of the household, of the garden, of the field or forest; those of benefit to man, and others that are interesting or beautiful. Insect eggs hatch into what is called the larvæ. The larvæ of flies are called "maggots;" of beetles, "grubs;" and of moths and butterflies, "caterpillars." Ask the children to name and find those that should be destroyed, and tell why. Study such as the spider, mosquito, grasshopper, potato bug, ant, fly, ladybug, and plant louse.



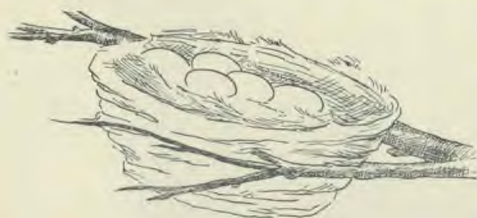
The life history of the grasshopper is interesting. He has six long legs with which to jump, two straight wings and two that he folds up like a fan. He flies only short distances and then alights. The mother digs a hole in the ground with a little sword arrangement on her

body, and in it places the eggs, covering them over with a sticky substance that hardens. She leaves them there all winter, and early in spring grasshoppers are everywhere.

The grasshopper resembles his parent early, except that his body is shorter and his wings are small. He eats very greedily of grass and leaves. He bursts his coat six times before finding one that will wear the rest of his life. Each new coat forms before the old one is shed. His face is comical, for he has a curtain over his mouth. The male makes the music by rubbing his wings together rapidly, or by rubbing his legs against his wings. The cricket and the katydid belong to the same family.

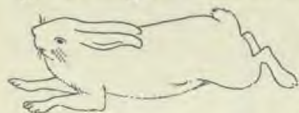
Fourth Week — Birds

Of the birds common to most localities the vesper, chipping, and song sparrow,



and the wren are the first to arrive in April. The swallow and thrasher appear about the second week, and the swifts, whippoorwill, and catbird the third week. Kingbirds and humming birds arrive as early as April 22 or 23. Let us classify these birds according to their manner of securing food.

Swifts, swallows, and kingbirds catch their food while flying. Woodpeckers get the "grubs" from the wood and bark



of trees. Wrens, flickers, and meadow larks eat insects on or

near the ground, while others get theirs from flowers, trees, and other plants. How interesting it is to watch the birds get their meals! How quickly they dart for their prey and fly off with it!

Do something to attract the birds, then watch their movements. Follow at a safe distance a bluebird to his hole or box, and about the second week you will see preparations for action. Robin will be singing to his little mate a week later.

Get near the bluebird nest to watch developments. How do the bluebirds build their nest?

How many eggs, and of what color? How is the mother fed? Does the father bird help at all? When the wee ones are hatched notice how helpless they are. When do they



open their eyes? The father and mother are tireless, it seems, in filling these open mouths. Count the trips taken to feed all. The sanitation of the nest must be looked after. Which bird does it, and how? Compare the condition (covering, strength, and independence) of these "tree babies" with that of the "ground-nest babies," such as the chicken, duck, pheasant, grouse, turkey, etc. Why do the little chickens have strong legs, covered bodies, open eyes, and strength al-



most as soon as hatched? The tree birdies are fully equipped when ready to fly. Baby birds do not act entirely by instinct — far from it. They are taught to fly,

to defend themselves, to secure shelter, what to eat and where to find it, and even to sing. Their food is sometimes used as a bait to make the timid ones fly, as in their hunger they forget all else. A mother bird sometimes will select food from a tree or bush in full sight of the birdie, bring it to the hungry one, then leave him with his appetite still unsatisfied to get more of the same for himself.

Our friend the robin has an elaborate nest (review). Early when the dew is on the grass, he is out searching for twigs and dead grass, for they are then more pliable and easier to weave. Count the trips he makes to build his nest while gathering twigs, twine, mud, etc. (In review show what help the robins are to apple trees.) Perhaps during the first week in May we may have the pleasure of seeing the four blue eggs hatched, and four big hungry mouths opened very wide, with father and mother intensely busy supplying worms from a near-by garden.

From the National Association of Audubon Societies, 1974 Broadway, New York, a leaflet giving information about the bird, a colored plate, and one to color, can be procured for 2 cents.

BUSY WORK

Third and Fourth Weeks

Using patterns, cut out chickens, eggs, birds, rabbits, fishes, ducks, leaves, kites, trees, sunbonnet girl, and the overall boy.

Mold eggs, birds, nests, bird boxes, trees, buds, umbrellas, and chickens out of plasticene or clay.

Use an umbrella, a chicken, or a bird as a cardboard sewing model.

With brown and yellow crayolas make ovals, one over the other, to form a robin's nest. Paste four pale blue eggs in it.

Draw the limbs of a tree, and on it paste the nest.

Trace, cut, and color a robin. This will be the robin chart.

Draw or cut out apple blossoms to be pasted on also.

To make the bluebird chart, cut out a bird house; paste on paper mounted on a pole or tree limb; outline, cut, and color the bluebird.

Cut out six bluish eggs, and mount.

Make simple posters for April.

No. 1. Use plain white paper. Color land green, sky blue. Objects: Sunbonnet girl and tiny yellow chickens. Cut objects from pattern. Paste on land.

No. 2. Same landscape. Objects: Gray hen and little yellow chicks; also a black hencoop (draw or cut out and paste).

No. 3. Color sky blue, and the water blue-green. Objects: Mother duck, followed by several ducklings. Objects white.

Steps in free-hand paper cutting that may prove helpful:—

1. Given a hectographed or outlined copy, trace over with a pencil.

2. Cut out.

3. Trace around onto stiff paper.

4. Cut out.

5. Draw on paper, looking at object.

6. Cut, looking at object.

7. Draw without looking.

8. Cut without looking at object or drawing.

NOTE.—As it is not always possible to print the patterns full size in the EDUCATOR, parents and teachers may enlarge the pictures by drawing outlines a proper distance outside of the lines given in the printed picture.—Ed.

Home Schools

OUR attention has recently been called to some excellent work that is being done in isolated homes, by children in the first grade. One of these little pupils, Cora Lyndon, sends her lessons from far-off Papara, Tahiti. The mother, who is the teacher, is taking advantage of the Mothers' Normal Course, offered by the Fireside Correspondence School, and according to the lessons that have been shown us by Mrs. Agnes Lewis-Caviness, who conducts this course, excellent results are obtained.

The following quotation from Mrs. Lyndon's letter is interesting:—

"I am inclosing in this lesson all the written work Cora has done up to page 30 of the reader. She does most of her writing on her slate, as paper is very expensive out here, and I only have her write on paper that which I desire to send to you. She can read readily every word of both print and script up to page 30."

Another little girl, Marjory Fields, of Imbler, Ore., has done very satisfactory work in writing, elementary cardboard work, and cardboard sewing.

We are pleased to know that such an excellent opportunity exists for the children who are deprived of the usual school advantages. It is evident from the results obtained that mothers who can devote a little time every day to this work will succeed in imparting the necessary instruction in reading, writing, and other elementary studies in a more systematic and pedagogical manner than they could do without this course of instruction.

We hope that an increasing number of parents who are living in isolated places will take advantage of this Mothers' Normal Course.

The Correspondence School

THE Fireside Correspondence School enrolled during 1916 three hundred and eighteen new students. Its goal for 1917 is three hundred and fifty. With the variety of subjects the school offers, the moderate tuition charged, and the efficient service rendered, this goal will surely be reached. There were eighty-six subjects completed last year, and 5,381 lessons corrected.

Prof. M. S. Reppe, of the Danish-Norwegian Seminary, at Hutchinson, Minn., writes of the work of the school:—

"My eyes have been opened to the great value of this school to our people. There is certainly no excuse for any one to complain because he does not have the opportunity of getting an education. The

school is within reach of all. The tuition is reasonable, and one can study at home or while on a journey."

Similar to this is the experience of Prof. R. B. Thurber, who has been principal of Holly Academy, Michigan, and of Plainview Academy, in South Dakota. For several years he was principal of the Meiktila Technical School, Burma. He is now on the faculty of Emmanuel Missionary College, Berrien Springs, Mich. Writing from Rangoon, Burma, he said:—

"I am fully satisfied with the good I have received from the study of church history. I want to emphasize my appreciation of the strength of the courses, and the good judgment shown in the selection of the textbooks which put the powers of the student to the stretch. You may quote me as a missionary who says, 'I believe the establishment and successful work of the Fireside Correspondence School is the most important advancement our denominational educational system has made in recent years.'

"I have thoroughly enjoyed these psychology lessons. I have studied them at spare moments during busy days and exacting labor, on the trains and in public places, and under the cool and restful shade of the pine trees of the Shan Hills. I bid good-by to these lessons with regret."

After the foregoing was written, he completed the course of study in logic.

Those who are interested in the plans of the Fireside Correspondence School for advanced study are invited to write to C. C. Lewis, Principal, Takoma Park, D. C.

Report of the Fireside Correspondence School for the Year 1916

Year	New Students Enrolled	Subjects Completed	Lessons Corrected	Cash Receipts	Cash Expenditures	Gain
1910	175	3	no record	\$ 1,860.10	\$ 2,124.76	\$
1911	162	24	" "	2,140.29	2,688.79	
1912	125	34	" "	1,668.27	1,852.86	
1913	229	46	" "	1,896.80	2,141.18	
1914	214	52	3,475	1,380.54	2,476.98	628.53
1915	208	66	4,207	2,057.45	2,030.82	26.63
1916	318	86	5,381	3,784.19	3,022.46	761.73
Totals	1,431	311	13,063	\$14,796.64	\$16,337.85	\$1,416.89

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Physical Culture Drills

(Concluded from page 233)

forward across the left, touching the toes to the floor a few inches to the other side of the left foot on count 1.

Replace foot on count 2. Continue for 8 counts.

Change and point the left foot across the right, and replace, 8 counts.

Alternate for 8 counts.

Variation.—*a.* Touch the right toe forward on count 1.

Bring heels together on count 2.

Cross the right foot obliquely left on count 3.

Replace the foot on count 4.

Repeat 4 times in all.

Repeat with left foot.

b. Alternate point step sideward with cross-step.

Marching Exercise.—The column marches by fours to the left around the gymnasium; when near the corner the command is given: Change places, single! Upon reaching the corner, the first one on the left then passes straight ahead, and turning to the left, takes a position which will place him on the right end of his rank. The second one follows him, and takes a position to the left of the first; the third follows, and takes his place at the left of the second, and the fourth one drops into the left of the third. All have now turned to the left, and they march forward in a rank of fours as originally, except the order of the rank has been completely reversed. The remaining ranks follow in the same order. To resume the original order, change again, single, at another corner.

Books and Magazines

"THREE INDUSTRIAL NATIONS," by Lydia Blaich, supervising principal of public schools, Indianapolis, Ind. American Book Company, New York, Cincinnati, and Chicago. 366 pages.

A history of the commercial and industrial growth of England, Germany, and the United States. Interesting accounts are given of the most important commercial activities, political conditions, crops, animal industries, and the foreign commerce of these nations. The growth of the oceanic power of England, the rise of Germany as a commercial nation, and the wealth of the United States, in its home industries and its foreign commerce, are ably treated from a pedagogical standpoint. It is especially suited for supplementary reading in geography. The book is well illustrated and contains excellent maps.

"STORIES OF DIXIE," by James W. Nicholson. American Book Company. 241 pages.

The true story of Dixie, containing not only the history of the South and its struggles, but also many of the jokes, games, and sports of the Southern people. It begins with an account of the life of an early settler and his family, and continues through the Civil War. An excellent book for young people.

"THE STORY OF THE FOREST," by J. Gordon Dorrance. American Book Company. 237 pages.

An instructive book on the life of the forest. It deals primarily with the trees, from the planting by nature until maturity, discussing also many products of the wood, such as coal and charcoal. A tree's fight with insects is portrayed, and interesting stories are told of the denizens of the trees. The life of woodsmen in lumber camps is described, and an account of three famous trees of history—"Penn's Treaty Tree," "The Charter Oak," and "The Washington Elm"—is among the interesting features of this book.

"A CHILD'S BOOK OF POETRY," in three books. Poems selected by Emilie Kip Baker. American Book Co. Each, 224 pages.

A selection of poems for children, including many excellent examples of the works of such standard poets and authors as Longfellow, R. L. Stevenson, Browning, and Lowell. Poems of merit for all occasions. These books are very suitable for children from the kindergarten up through the grammar grades.

"PRINCIPLES OF ACCOUNTING," by Gilman, reviewed in our last number by Prof. A. G. Taylor, Union College, is published by the La Salle Extension University, Chicago, Ill.

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